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ABSTRACT

The purpose of this study was to collect information on the guidance needs of students in vocational technical schools in Minnesota. The five areas of student concern in this study include housing, financial needs, information relating to school, social and recreational activities, and career plans. Data was obtained from a questionnaire designed to gather personal data, opinions concerning themselves, and those services considered to be important by the students. The results of this study indicate that student services supplementary to the instructional program are being offered in various ways. Some schools did assist some students in finding a place to live and helped others in finding part time employment. Students indicated that help in finding a job was perhaps the most important service which the school could perform. Students also indicated that someone at school had given them information about careers and job opportunities. (KJ)

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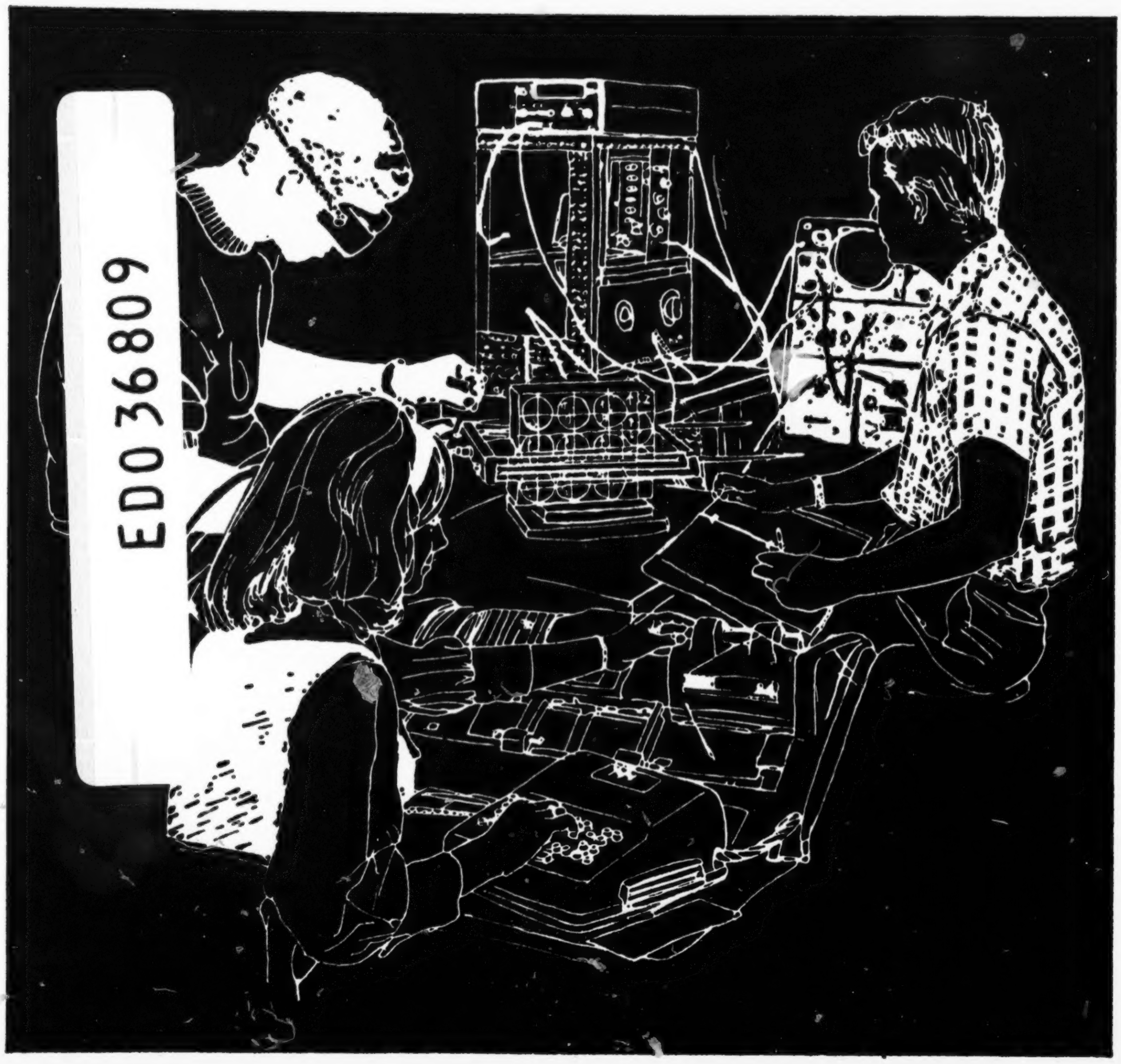

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VOCATIONAL STUDENTS' PERCEPTION OF GUIDANCE NEEDS:

A Study Conducted in Minnesota Area Vocational–Technical Schools

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1969

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Preface

The purpose of this study was to collect information on the guidance needs of students in the Area Vocational Technical schools in the state. This information is much needed in building the counselor role model to serve the students in these schools.

Vocational education directors and student personnel supervisors need this information to point up the importance of not assigning counselors to non-guidance functions which do not relate to the guidance needs of these students.

Many people, counselors, directors, teachers and especially students cooperated in making the study possible. It is the sincere wish of all who have been involved in the planning and execution of this study that the results of the survey will be useful to the Area schools in Minnesota as they seek to serve the students who come to them for vocational training.

Pupil Personnel Services Section

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"Why is vocational education necessary? It is the bridge between man and his work. Millions of people need this education in order to earn a living. Every man wants to provide for his family with honor and dignity and to be counted as an individual. Providing for an individual's employability as he leaves school, and throughout his worklife, is one of the major goals of vocational education. Vocational education looks at a man as a part of society and as an individual, *and Never Before Has Attention to the Individual as a Person Been So Imperative.*"

From *Vocational Education: the bridge between man and his work: Summary and Recommendations,* 1968

Chapter 1

Introduction

"And never before has attention to the individual as a person been so imperative." This recent statement by the Advisory Council on Vocational Education (1968) states the underlying philosophy which motivated this research which was undertaken to study the guidance needs of students in the Area Vocational Technical schools in Minnesota, and which is reported in this monograph. The purpose of the research was to identify student needs and concerns as perceived by the students in order that the Area schools of Minnesota might better serve the needs of individual students.

Background information regarding the Area Vocational Technical Schools in Minnesota is given in the 1968-1970 brochure. The Area schools were established as part of the Minnesota system of public education in 1945 in order to equalize educational opportunities for young people and adults within the state. The schools provide education in trades, industrial and technical occupations, distributive occupations, health occupations, office training, agriculture, and homemaking. At present there are twenty-six Area schools located throughout the state which have been designated by the State Board of Vocational Education.

Although the first Area schools were established in 1945, no systematic effort has been made to assess the needs of students in these schools prior to the initiation of the present study. Moreover, relatively little has been done to assess the needs of vocational-technical students in other states throughout the nation.

One major research program which has been implemented, in an attempt to study students similar to those in the Area schools of Minnesota, is that which is being conducted by Kenneth B. Hoyt at the State University of Iowa and which bears the title of "Specialty Oriented Student Research Program" (Hoyt 1962, 1963, 1965A, 1965B, 1966, 1968A, 1968B, 1968C, Hoyt and Cochran 1965, Whitfield 1967.)

Hoyt (1965A) has described what he means by the "specialty oriented student":

> The term "specialty oriented studnet" was devised in 1961 to represent those persons whose prime educational motivations are oriented around a desire to acquire an occupational skill or set of skills which could be used to enter the labor market. I have counseled many students who seem to fit this description. In terms of *students,* I would like to contrast the "specialty oriented" with the "liberal arts" oriented student. I would further like to differentiate both kinds of students from persons having no educational motivations beyond the secondary schools.

Hoyt and Cochran (1965) further charaterize these young people as essentially "normal" youth:

> The students . . . are not the "culturally deprived," "juvenile delinquents," "physically handicapped," "emotionally unstable," "poverty stricken," "creative," "intellectually able," or "slow learners." . . . While some from each of these "special" groups are to be found in the over 5,000 cases accumulated to date, the most "special" thing about these students is that, as a group, they are pretty "normal."

Hoyt (1968B) collected a substantial amount of demographic information about specialty oriented students:

> It is now known, for exmaple, that most of them are less than 21 years of age, come from lower-middle socioeconomic backgrounds, receive only a portion of school expenses from their parents, rate their training programs as good, complete their training, and enter into training-related occupations.

Hoyt began this project in 1962, and within five years he had obtained data from over 12,000 post high students attending private trade, technical, or business schools in various parts of the United States. Although the vast majority of data collected to date has been from students enrolled in private vocational schools, it is expected that the major emphasis of the project will shift to collection of data from students enrolled in publicly supported institutions when financial support for such an emphasis becomes available (Hoyt and Cochran 1965).

Hoyt and his co-workers were able to identify certain difficulties involved in the counseling of specialty oriented students by high school counselors and to supply educational-occupational information useful in counseling such students. The present study is concerned with the needs of post high students who are enrolled in the Area schools of Minnesota, and only brief mention will be made of the counseling needs of students at the elementary and secondary levels. However, at various times throughout the course of this paper, mention will be made of the results which Hoyt obtained in his study of post high specialty oriented students in trade, technical and business schools.

Another important research effort is that which has been reported by Bottoms (1966), Bottoms and Oelke (1966), and Bottoms and Swain (1967). Bottoms and Swain found that within the State of Georgia, high school counselors had difficulty in broadening their view of opportunities available to capable students because of the prestige assigned exclusively to the independent farm owner and the professional occupations. They noted, however, that the current needs of the economy can only be served by a recognition of the new importance and status of those occupations for which students are prepared by means of technical-vocational education.

The research which was conducted by Bottoms was an effort to determine the student personnel services needed in Georgia's Area Vocational Technical Schools. Bottoms made the assumption that school administrators, faculty members, and students in the Area schools are in the best position to recognize needed student personnel services and the extent to which these services are being performed. His data is based on a survey of these three groups of persons, and his research is designed to identify specific needs within the Area schools of Georgia, rather than to be carbon copies of services that have proven successful in other institutions.

Administrative personnel in the Area schools were asked to respond to a Criterion Checksheet which was organized into two major divisions: provision and facilities, 20 items, and student personnel services, 147 items. The student personnel division was organized into eight areas: recruitment, admissions, personnel records, orientation, occupational information, counseling, job placement, and follow-up. The items were stated in specific terms and with specific criteria, and respondents were asked to designate the level at which a service was needed and the level at which it was being performed. Faculty members and students were asked to respond in similar fashion to a Schedule of Student Personnel Services which was constructed by selecting 69 items from the Criterion Checksheet.

The reactions of all respondent groups indicated that each of the eight areas of student personnel service was an essential or a desirable service, and that none were being provided in an adequate way. It was found that all services were being performed less adequately in smaller schools than in larger schools, less adequately for night students than for day students, and less adequately in schools without a counselor than in schools with a counselor.

Bottoms makes the following recommendations to the Area schools of his state: to develop positive and systematic procedures for informing prospective students about the Area school program, to develop an admission program that assists a broad range of students in selecting a course of study from which they can benefit, to develop an adequate personnel record system, to develop an orientation program for new students that would assist them in adjusting to the new surroundings and in exploring the opportunities available at the Area school, to provide the student with information that would increase his awareness of the working world and his confidence and skill in meeting future situations pertaining to the working world, to provide counseling service for students, to provide an organized job placement program, and to provide a systematic follow-up program of students.

Waters and Zenger (1966) made a survey of guidance and counseling services in Area Vocational-Technical schools in Connecticut, Minnesota, North Carolina, Ohio, and Washington. Of the 51 responding schools who had guidance counselors, the following responsibilities were assigned to the counselor in at least one-half of the schools: testing, selection of students, admission of students, transfer of students in and out of the program, counseling in matters of training and employment, following the progress of students within the school, dropout contact and counseling, maintenance of records not included in cumulative folder, plus a function described as "Provision of Information about the Vocational Program to Area Schools."

Waters and Zenger (1966) note that many of the Area school directors who responded to their questionnaire commented on the importance and necessity of guidance and counseling services. One such comment was, "We have found increasing need to divide some of the aforementioned responsibilities as our enrollment increased (presently 644). Adequate counseling service is considered important and we are implementing this phase of our program at a rapid rate." Another summed it up this way: "I feel a 'new breed' of counselor is required in our Area Voc-Tech School. Specifically well prepared in occupational information, and closely associated with industry."

Counselors in the Area schools of Minnesota have recently been engaged in an attempt to define the role of a counselor in the Area schools, and in so doing, have listed many of the kinds of student services which Bottoms and others have suggested as being necessary in a vocational-technical school. In addition they make this statement regarding guidance (Minn. Dept. Ed., Pupil Personnel Services Section, 1969):

> An effective guidance program in an area vocational school or center provides counseling assistance to all students to help them in developing and implementing vocational plans. This includes assistance in decision-making relative to life goals enabling students to understand the relationship between their training and goals. A counselor serves as a resource person for the admission and placement of applicants and is the liaison between the school, home, and other community agencies. The counselor provides consultative services to help other professional staff understand the developmental needs and the potentialities of the individual student. The counseling staff conducts a program of continuous student appraisal and research of student needs.

In the present study, five major areas of student concern have been selected for special consideration in an attempt to identify student needs as perceived by students in the Area schools of Minnesota. These five areas are housing, financial needs, information relating to the school, social and recreational activities, and career plans. However, in this monograph, a discussion of these five major areas will at times result in the consideration of the broader range of student services such as recruitment and public relations, the selection and admission of students, orientation, some aspects of testing, program change, vocational and educational counseling, and job placement. In addition, some identification data regarding the students will be presented. A Summary Questions section, used to obtain summary information from students regarding the five major areas listed above, plus additional information regarding student concerns, is also reported.

In this monograph, the responses of a relatively large number of students are reported and discussed. However, it is not the purpose of this study to deny the needs of the individual student by

emphasizing the needs of large groups of students. Rather, it is intended that the needs of individual students may be better served through an understanding of the information which was obtained in this survey. It is hoped that this survey will contribute useful information in the identification of student needs in the Area schools of Minnesota, and that thereby, the needs of individual students within these schools will be served.

Chapter 2

Procedures

Data was obtained from a questionnaire designed to gather information from students in the Area Vocational Technical Schools in Minnesota regarding personal data, opinions concerning themselves, and those services considered to be important by the students. The questionnaire was formulated on the basis of questions used by Hoyt for the Specialty Oriented Student Research Program (Resident Student Form: undated). Additions and changes to the questionnaire were obtained from counselors in the Area schools in Minnesota and from other interested persons. A pilot study was conducted in one of the Area schools in February 1968 using 44 sheet metal and graphic arts students as subjects, and further revisions to the questionnaire were made as a result of that study.

The questionnaire was administered in March 1968 to all day students in attendance in each school on a day chosen by the school. A copy of the Questionnaire is included in Appendix E, together with a sample answer sheet, Instructions for Administration, School Codes, and Occupational Codes. No time limit was imposed for completion of the questionnaire except such as might be the result of class schedules in a particular school. Students were not asked to sign their name, and were assured that their responses were confidential.

Twenty-five of the 26 Area schools cooperated in the administration of the questionnaire. The following schools participated:

Alexandria
Anoka
Austin
Bemidji
Brainerd
Canby
Detroit Lakes
Eveleth
Faribault
Granite Falls
Hibbing
Jackson
Mankato
Minneapolis
Moorhead
Pine City
Pipestone
Rochester
St. Cloud
St. Paul
Staples
Thief River Falls
Wadena
Willmar
Winona

A total of 6,146 usable returns was obtained. The smallest number of usable returns from any one school was 50; the largest number was 1,044; and the median was 184. The responses were analyzed in order to obtain descriptive data regarding the number and percent of students who marked each response. The data was also organized according to the following groupings:

By school
By sex
For eight selected occupational programs
For twelve occupational groupings
By draft status (male only)
By length of attendance in the school
For schools with and without a counselor

Method of Data Analaysis

This paper will report the responses of all students in the survey. In addition, comparisons will be made between the responses of male and female students, and between the responses of students in the eight selected occupational programs and those of all students in the survey. The data for each school was reported to the counselors of the schools in October 1968, and by prior agreement, no further use is planned for this information. The other categories for which descriptive statistics were obtained are available for study and comparison by interested persons. To obtain this data, contact The Pupil Personnel Section of the Minnesota State Department of Education, St. Paul, Minnesota, 55101.

Eight Selected Occupational Programs. Four occupational programs were selected in which men tend to predominate, and four which are considered to be predominantly female occupations, giving a total of eight occupational programs chosen for special study. However, only one of the eight programs yielded data which indicated that the program was composed exclusively of members of one sex. For the other seven programs, one can only speculate as to whether there were students of both sexes in the program or whether these results were obtained because of marking errors on the part of the students. The number of persons in each of the selected populations is presented in Table 1. For convenience, the code numbers used to identify the occupational programs in the survey are retained in this report.

Two of the predominantly male occupational programs, machine operator and heavy equipment operator, yielded a relatively small number of subjects. Heavy Equipment Operation and Maintenance is offered in only one of the Area schools of

TABLE 1

NUMBER OF STUDENTS IN SURVEY FOR SELECTED POPULATIONS

Population	Number in Survey	Total
Male	4,352	
Female	1,780	
Total number identified by sex		6,132

Occ. Code	Occupational Program	Men	Women	Total
(29)	Machinist	305	6	311
(32)	Machine Operator	33	0	33
(40)	Heavy Equipment Operation and Maintenance	39	1	40
(50)	Electronics	417	4	421
(10)	Clerical	15	334	349
(12)	Secretarial	5	397	403
(28)	Practical Nursing	4	352	356
(61)	Cosmetology	6	192	198
	Total in eight selected occupational programs			2,111

Minnesota, and it was known in advance that the number of students in this program was relatively limited. However, four Area schools indicate that the program for Machine Operators is offered in their schools, but responses of students in that program were reported by only one school. Thus, the relatively small number of machine operators in the survey was not anticipated, and as will be noted, leads to certain difficulties in the interpretation of the data.

Statistically Significant Differences. The chi square was chosen as the method for determining statistically significant differences. Tate (1965) notes that the sampling distribution of chi square is of wide usefulness and is applicable to several problems involving ranked data as well as to problems concerning the compatibility of observed and expected frequencies. The formula used was

$$x^2 = \Sigma \frac{(f_o - f_e)^2}{f_e}$$

and Yates' correction was used on all 2 x 2 tables. Only differences significant at the .01 level or better are included. The null hypothesis was that there were no differences between the groups compared. All chi square values significant at the .01 level or better are listed in Appendix D.

Of the 57 questions which appeared in the questionnaire, twelve which were of particular relevance to this study were utilized in the analysis. Questions 13, 14, 22, 38, 43, and 50 were considered to be on a continuum and one chi square was calculated for each question. Response (4) was omitted from calculation in Question 14 because it represented a discreet response, while the preceding responses for that question were considered to be on a continuum. Questions 27, 30, 49, 53, 54, and 57 contained discreet responses, and a chi square was calculated for each response.

Meehl (1967) has commented in some detail on what might be called the paradox of statistical probability as employed in psychological studies and notes the logical impasse to which the use of tests of statistical significance can lead. However, the test of significance is still a commonly accepted and useful method for identifying differences between populations and was employed in this study. It should be noted, however, that a random sampling method was not employed in this study, and it would be incorrect to assume that the findings will generalize to any other population, if, indeed, such populations exist. Rather, the test of significance was used in order to determine whether or not differences between selected populations might be statistically significant, and was not intended for purposes of generalization.

Observable Differences. In addition, it was necessary to devise some method of locating important differences between groupings for the other 45 questions, which had not been subjected to chi square analysis. Examination of the data indicated that for the populations under consideration, a difference of ten percent or more between the percentage of persons in any of two selected groupings who marked any given response occurred infrequently enough to provide a useful cut-off point. Thus, the percentage of persons in the groupings under consideration who marked any given response was examined, and those that differed by ten percent or more were recorded. These are called "observable" differences.

Observable differences for men and women are listed in Appendix B, and for the eight selected occupational programs in Appendix C. For the data according to sex, observable differences were recorded when the responses of male and female students differed by ten percent or more, while for the selected occupational programs, an observable difference was recorded when any program differed by ten percent or more from the percentage of all students in the survey who marked that response.

Comparison of Methods. As might be expected, the two methods of determining differences between populations tended to yield somewhat different results. This data is presented in Table 2. With the chi square, the larger the number of persons included in the population, the more likely it was that many of the calculations would be statistically significant. For male vs. female, for example, almost two-thirds of the chi square values were statistically significant; while for the selected occupational programs, less than half were statistically significant.

TABLE 2

COMPARISON OF NUMBER OF STUDENTS IN SELECTED POPULATIONS, WITH NUMBER OF STATISTICALLY SIGNIFICANT DIFFERENCES AND NUMBER OF OBSERVABLE DIFFERENCES FOR EACH POPULATION

		No. of Statistically Significant Differences (.01 Level) for 12 Selected Questions		No. of Observable Differences (10% or More) For All Questions, Except 1, 2, 4 and 5
	No. of Students	Significant	Not Significant	
Male	4,352	39	20	44
vs.				
Female	1,780			
Total number Identified by sex	6,132			
All Students	6,146			
vs.				
(29) Machinist	311	7	52	9
(32) Mach. Operator	33	4	55	95
(40) Heavy Equip.	40	7	52	85
(50) Electronics	421	12	47	7
(10) Clerical	349	25	34	41
(12) Secretarial	403	25	34	41
(28) Practical Nurse	356	38	21	82
(61) Cosmetology	198	13	46	39
Total number of students in eight occupational programs	2,111			

Since men in the survey outnumbered women more than two to one, the women tended to show a greater number of differences from the responses of all students than did the men. Thus, for the four programs in which most students were women (Occ. Codes 10, 12, 28, and 61), the number of statistically significant differences was three times as large as for the programs in which men predominate (Occ. Codes 29, 32, 40, and 50). However, the number of statistically significant chi squares for the program of practical nursing was noticeably larger than for the other three programs in which women predominate.

On the other hand, there was a tendency for the number of observable differences to be greater when the size of the population was small. The number of machine operators and heavy equipment operators in the survey were both small, totaling 33 and 40 persons respectively. Thus, if four or more persons in either of these groups responded differently from the responses of the total student population, an observable difference of ten percent or more would occur. The number of observable differences for these two groups is more than ten times as large as the number for machinist and electronics, the other two predominantly male programs.

The programs in which women are more likely to be enrolled also showed more observable differences than those in which men tended to predominate as a result of the fact that women made a smaller contribution to the determination of the total student population. Practical nursing again, however, showed a greater number of observable differences, double that of any of the other three predominantly female programs.

Except for the programs of machine operator and heavy equipment operator, all observable differences which appeared on those questions for which the chi square was calculated were also statistically significant. However, for the programs of machine operator and heavy equipment operator, 26 observable differences are not statistically significant, two are in doubt because expected frequencies are less than five, and only eleven observable differences are statistically significant on those questions which were subjected to statistical calculation.

For those questions with discreet responses for which a chi square was calculated for each response, questions 27, 30, 49, 53, 54, and 57, the number of statistically significant differences is considerably larger than the number of observable differences for all populations except machine operator and heavy equipment operator. For the other six occupational programs, there were 43 observable differences but 110 statistically significant differences on these six questions. For the same six questions, there are nine observable differences of ten percent or more between the responses of men and women, while 34 of the responses are statistically significant at the .01 level.

In the pages which follow, an attempt will be made to note important differences between the populations under consideration. Not every statistically significant difference, nor every observable difference will be mentioned. For a complete listing of these, the reader is referred to Appendices A, B, and C. However, for those questions for which a test of significance was calculated, no observable difference will be reported in the text of this paper which is not also statistically significant. However, differences of less than ten percent which are statistically significant, will sometimes be presented to aid in the interpretation of the data.

Chapter 3

Findings

Although 6,146 usable returns were obtained from this survey, on almost every question it was found that a few students had not marked an answer to that specific question; while for an additional few, the response had to be omitted in processing because of incorrect marking of the answer sheet. Therefore, the total number of responses for any one question may not necessarily be 6,146. For questions one through nine, a "Did not respond" category was included in the processing of the data. However, for the remaining 48 questions, this category is omitted, and the total number responding to any given question may be slightly smaller than the total number of students in the survey.

In addition, certain questions were labeled "Mark all which apply." For these questions, a student might mark as many responses as he wished. Therefore, the total number of responses to these questions is likely to be considerably higher than the number of students in the survey. The percentage given for such a response is the percentage of the total number of students in the survey who marked that particular response. When a selected population is under consideration, the percentage given is the percentage of the total number of students in that population who marked that response.

Many questions contained space for students to write in comments, and a sizable number of questionnaires were obtained which contained one or more written comments. No attempt will be made to present these comments in an organized way. However, throughout the course of this monograph, reference will be made occasionally to the written comments of students. In addition, two open-ended questions were included in the questionnaire, and a few of the written responses to these questions will be presented. Questionnaires which contain written comments are available to any interested person who might desire to study these comments in a systematic fashion.

IDENTIFICATION DATA

Questions 1 - 9

Table 4, Appendix A, presents the number and percent of all students in the survey who marked each response concerning Identification Data, for questions three through nine. Question One asked the name and code number of the school in which the student was enrolled. The schools which cooperated in this survey have already been identified (p. 7). No additional data concerning individual schools will be presented in this study, as it is not the purpose of this survey to study specific schools, and the data relevant to the cooperating schools has already been returned to them.

Question Two asked the name and code number of the occupational program in which the student was enrolled. More than 200 occupational programs were available in the Area schools of Minnesota at the time of the study. However, to have identified each program specifically would have been cumbersome, and was unnecessary because many of the programs with somewhat different names are similar in content. Occupational programs, therefore, were grouped together according to similarity of content, and a code number was assigned to each. Thus, some 68 programs were identified as being available in the Area schools.

Table 3 lists those occupational programs in which at least 100 or more students participating in the survey were enrolled.

TABLE 3

OCCUPATIONAL PROGRAMS IN WHICH 100 OR MORE RESPONDING STUDENTS WERE ENROLLED

TOTAL N = 6146

Occ. Code	Program	Number Responding	Percent of Total N
(08)	Accounting	336	5.47
(10)	Clerical	349	5.68
(11)	Data Processing	192	3.12
(12)	Secretarial	403	6.56
(16)	Carpentery	221	3.60
(19)	Welding	218	3.55
(28)	Practical Nursing	356	5.79
(29)	Machinist	311	5.06
(31)	Tool and Die	147	2.39
(33)	Aircraft Mechanics	126	2.05
(35)	Auto Mechanics	588	9.57
(38)	Farm Equipment Mechanic	134	2.18
(44)	Auto Body	105	1.71
(49)	Drafting	431	7.01
(50)	Electronics	422	6.87
(55)	Electricity	207	3.37
(61)	Cosmetology	198	3.22
	Total	4,744	77.20%

An inspection of this table indicates that 77 percent of the students who completed usable answer sheets were enrolled in only 17 of these vocational programs. However, this table should not be interpreted to represent actual enrollment figures in the Area schools at the time of the survey, since it has already been noted that there may have been students in programs in certain of the cooperating schools to whom the questionnaire was not administered. Moreover, as the occupational programs of the schools continue to change in response to current manpower needs, it would be expected that enrollment in any given program may increase or decrease with the passage of time.

No single occupational program enrolled as much as ten percent of the total number of students in this survey. However, five observable differences occur between the percentage of men and women enrolled in specific occupational programs, and four of these programs were the four selected for special study which were considered to be predominantly female. Nineteen percent of the women were enrolled in clerical training, 22 percent in secretarial training, 20 percent in practical nursing, and 11 percent in cosmetology; while less than one percent of the men were enrolled in any of these four programs. The fifth program, auto mechanics, enrolled 13 percent of the men, but less than one percent of the women. None of the four predominantly male occupations chosen for special study showed an observable difference of ten percent or more between percentage of men and women enrolled. However, this is understandable when one considers the fact that some 68 occupational programs were included in the survey.

Additional identification data indicates that 35 percent of the students were 18 years old, 34 percent were 19, and 14 percent were 20 years old. Most of the remainder, or approximately 17 percent were 21 years or older. It would be expected that a large percentage of the students would be under 21 years of age since any resident of Minnesota may attend an Area school without charge for tuition if he begins his studies before he reaches the age of 21.

The women tended to be somewhat younger than the men. One half of the women were 18 years of age; while about the same percentage of men were either 19 or 20 years old. Twelve percent of the men and five percent of the women were between 21 and 25 years of age, and about six percent of each group were 26 years or older. In the clerical and secretarial programs, over 60 percent of the students were 18 years old, while 55 percent of the machine operators were 26 years or older.

Eighty-three percent of the students were high school graduates and 8 percent had attended college before enrolling in an Area school. About 95 percent of the clerical and secretarial students were high school graduates, while 58 percent of the machine operators did not graduate from high school. Seventy-one percent of the students were male, and 29 percent female. Twelve percent were military veterans, and 98 percent were full-time students. Statistics regarding marital status are not presented due to a processing error for the data from Question 5.

Seventy-eight percent of the students had been enrolled in the school for twelve months or less. Ninety-seven percent of the women and 71 percent of the men had begun their present course of study within the twelve month period preceding the administration of the questionnaire. All machine operators indicated that they had been enrolled for twelve months or less; while among the machnists (33 percent), heavy equipment operators (50 percent), and electronics students (41 percent), the percentage of students who had been enrolled for more than 12 months was larger than for the total student population (22 percent). These figures are related to the length of the occupational programs under consideration. While the exact length of a program will vary somewhat from one school to another, the four predominantly female programs tend to require from nine to 12 months for completion. The electronics programs range from 18 to 24 months, the program for machinists normally takes 18 months, and the program for heavy equipment operators requires 18 months.

HOUSING

Questions 10-16

Table 5, Appendix A, gives the number and percent of all students in the survey who marked each response concerning Housing. Appendix B presents the listing of observable differences of ten percent or more between male and female students. Appendix C presents the listing of observable differences of ten percent or more between the responses of students in the eight selected occupational programs and those of the total student population.

Two questions in the section on Housing were subjected to chi square analysis. They are questions 13 and 14. Chi square values for these questions are presented in Appendix D. For these two questions, no observable difference will be presented in the text of this report which are not also statistically significant.

Some 31 percent of the students in the survey indicated that the school they were attending was located in their home town, and an additional 31 percent indicated that the school was less than 35 miles from their home town. Electronics students (42 percent) were more likely to indicate that they were attending school in their home town than was the total student population, while machine operators (6 percent) were less likely to mark this response. Sixty-eight percent of the heavy equipment operators, on the other hand, indicated that their home town was at least 100 miles away from the school, as compared with 10 percent for the total student population.

Forty-eight percent of the students in the survey were living with parents, 27 percent in a rented house or apartment, and 16 percent rented a room in a private home. Fewer of the women (37 percent) indicated that they lived with their parents than did the men (52 percent), and almost 60 percent of the machinists reported living with parents. The heavy equipment operators were more likely to live in a rented room (68 percent), while 12 percent of the nurses lived in school housing as compared with about one percent for the total student population.

Fifty-eight percent indicated they already had a place to live when they came to the school; 16 percent responded that someone at school helped them find a place to live; and 12 percent indicated that they had found a place to live by themselves. The men (61 percent) more frequently reported having a place to live when they came to the school than did the women (50 percent), and the electronics students (68 percent) surpassed the other men on this reponse. Machine operators (36 percent), heavy equipment operators (58 percent), and practical nurses (28 percent) surpassed the total student population (16 percent) in indicating that the school had helped them to find a place to live.

This data lends itself readily to interpretation in light of the information obtained from preceding questions. It has been noted that men were more likely to be living with parents than were women and that electronics students were more likely than the total student population to be attending school in their home town. It is, therefore, quite consistent for them to indicate that they already had a place to live when they came to the school. Since the nurses were more likely than the total student population to live in school housing, and the heavy equipment operators to be at least 100 miles away from their home when they attended school, it would appear that the services of the school were required by both groups in obtaining housing, and that it both cases the school was likely to fulfill a service to these students in assisting them in finding housing. It is somewhat more difficult to imagine just why the machine operators would need help in finding housing, but it appears that the school did render this service to about one-third of the group.

Question 13 asked: "How much trouble did you have finding a place to live?" Seventy-seven percent of the students indicated that they had no trouble at all in finding a place to live; while another 15 percent said that they had found a place without much trouble. This question was subjected to the chi square analysis and a significant difference was found between the responses of men and women, but not between the reponses of any of the selected occupational programs and all students. An inspection of the reponses of men and women, however, indicates that the differences were relatively small, men having a slight tendency to indicate that they had "No trouble at all," and women to indicate that they had "not much" or "some" trouble.

Question 14 asked: "If you do not live at home, how well satisfied are you with the place where you now live?" On this and the questions which followed, approximately half of the students indicated that they did live at home. Most of the remainder responded that they were either "very satisfied" or "satisfied" with the place where they lived.

Question 14 was also submitted to statistical analysis and the practical nursing program produced the only satistically significant result which appeared. Chi square results indicated that the practical nursing students were significantly less satisfied with the place in which they lived than were the total student population. As previously indicated, the response, "I live at home," was omitted from statistical comparison for Question 14.

Question 15 asked: "If you are living away from home, what things do you like about the place where you live now? Mark all which apply." Reasons most commonly marked by all students in the survey for liking the place where they lived were that it was close to school (25 percent), inexpensive (23 percent), and that it was attractive and comfortable (21 percent). Nurses (36 percent) and heavy equipment operators (55 percent) were more likely than the total student population (25 percent) to indicate that one of the things they liked about the place where they lived was that it was close to school, and nurses (31 percent) were more likely than the total population (18 percent) to indicate that their housing was quiet so that they could study.

Women (32 percent) were more likely than men (17 percent) to indicate that their housing was comfortable and attractive. Thirty-three percent of the heavy equipment operators, 36 percent of the clerical students, 34 percent of the secretarial students, and 32 percent of the cosmetologists marked this response as compared to 21 percent for the total student population. Heavy equipment operators (38 percent) and nurses (37 percent) also indicated more frequently than did the total student population (23 percent) that one advantage of their housing was that it didn't cost much.

Question 16 asked: "If you are living away from home, what things do you dislike about the place where you live now? Mark all which apply." Seven alternatives were offered as to why the student might dislike his present housing, and the alternative "I like it here" was also presented. The statement, "There isn't anything to do in my spare time," (marked by 14 percent of the students) was the only indication of dissatisfaction with housing that was marked by more than ten percent of the students in the survey, while the response "I like it here" was marked by 23 percent of the students.

Women (30 percent) were more likely than men (20 percent) to mark "I like it here." Heavy equipment operators (38 percent), clerical (34 percent), secretarial (33 percent), and cosmetology (34 percent) students marked this response more frequently than did the total student population (23 percent). Nurses (19 percent) were more likely than the total student population (six percent) to indicate that they thought the rules were too strict. Occasional written comments indicated that a troublesome roommate or a meddling landlady might be a problem for some students. Other sources of dissatisfaction which appeared in the written comments were lack of a telephone, not enough furniture, and lack of privacy.

However, a picture of relative satisfaction emerged from the data on Housing. For questions 14 and 15, an inspection of the total number of responses for all students, including the response "Other," but omitting "I live at home" and "I like it here," showed that there were 8,062 responses indicating satisfaction and only 3,055 which indicated dissatisfaction. In summary, the students had relatively little difficulty in finding a place to live if they did not already have one, the school in some cases assisted them in finding housing, and the students tended to be satisfied with the housing in which they lived.

FINANCIAL INFORMATION

Questions 17-23

Table 6, Appendix A, gives the number and percent of all students in the survey who marked each response concerning

Financial Information. Appendix B presents the listing of observable differences of ten percent or more between male and female students. Appendix C presents the listing of observable differences of ten percent or more between the responses of students in the eight selected occupational programs and those of the total student population. Question 22 in the section on Financial Information was subjected to chi square analysis and the chi square values for this question are given in Appendix D. For this question, no observable difference will be reported in the text of this report which is not also statistically significant.

Presentation of Data

Question 17 asked: "What are your sources of support while you are in school? Mark all which apply." The students indicated three major sources of support while in school: parents (49 percent), a job (47 percent), and savings (41 percent). Although a larger percentage of men than women indicated that they lived with their parents, the women (64 percent) were more likely than the men (41 percent) to indicate that parents were one of their sources of support, and clerical students (73 percent) were the most likely of the four predominantly female occupational programs under consideration to indicate that their parents were a source of support. Heavy equipment operators (53 percent) and nursing students (56 percent) listed savings as a source of support more frequently than other students in the survey, and 58 percent of the machine operators listed the Vocational Rehabilitation as a source of support. Fifty-three percent of the men and 33 percent of the women indicated that they had a job. Clerical (31 percent) and secretarial students (43 percent) were more likely to be employed than students of practical nursing (23 percent) or cosmetologists (17 percent).

A majority of the students in the survey (60 percent) indicated that they were not financially independent; 30 percent claimed to be self supporting; and the remainder indicated that one or more persons besides themselves was dependent upon them for financial support. Fifty-five percent of the men and 71 percent of the women indicated that no one, including themselves, was dependent on them for financial support, while men were more likely to have one or more persons dependent on them for support. Forty-eight percent of the machine operators indicated that three or more persons were dependent on them for financial support, as compared with seven percent for the total student population.

Some 25 percent of the students in the survey indicated that they needed help in finding a job to help with expenses. Machine operators (58 percent) and heavy equipment operators (38 percent) were more likely than other students in the survey to indicate that they needed help in finding a job; while nursing students (9 percent) were less likely to desire such help. Several of the written comments regarding this question will be presented here, not because they are considered to be representative of any specific population, but because they illustrate the needs and concerns of some individual students:

* * *

> Although I had originally planned to work while in school, I have the chance to spend the morning hours with my daughter, so I do.

* * *

> I've looked for a part-time job, but without transportation it seems impossible.

* * *

> I signed up for the Work-Study Program here in school but I never heard anything about getting help to find a job.

* * *

> A job would ease the drain on my checking account.

* * *

> I think I would, but I have had jobs offered but can't decide.

* * *

About 40 percent of the students in the survey did not have a job at the time the questionnaire was administered, while about 34 percent worked 20 or more hours per week. Eleven percent of the women and 42 percent of the men indicated that they were now working 20 or more hours per week.

Students were asked how they found their job, if they had one now. Eighteen percent of the students in the survey indicated that they had a job before they enrolled in the Area school. Sixteen percent indicated that a friend or relative told them about the job which they had. Nineteen percent of the men and eight percent of the women indicated that a friend or relative told them about their present job, while 21 percent of the men and 11 percent of the women indicated that they had a job before they enrolled in the school. In response to this question, some students wrote in the comment, "I found it myself," while others described briefly how they went about finding a job.

Question 22 asked: "How much trouble are you having getting enough money to make it through this school?" Forty-four percent stated that they were having no trouble at all getting enough money to make it through school; while 39 percent marked the response, "It's a little hard, but I'm making it O.K." Less than three percent of the students in the survey indicated that financial difficulties were so severe as to be likely to cause them to discontinue their course of study.

Question 22 was subjected to chi square analysis and yielded four statistically significant differences. Female students as compared to men students were more likely to indicate that they were having no difficulty; while the men indicated that it was hard but they could do it. Clerical and secretarial students also tended to indicate that they were having no difficulty as compared to the expression of some difficulty by the total student population. Nurses, however, tended to be having somewhat more difficulty than the total student population.

In response to this question, a nursing student wrote:

* * *

> I would like a job to help pay back my folks if possible. They say I don't have to but I want to. . . . MY parents pay for school, but I do need more spending money.

* * *

A married man wrote this comment:

> Working caused me to miss a lot of school. Being on a 40 hour a week shift it was hard but had to work to pay bills.

* * *

Question 23 asked: "If you had known before coming here that it would cost as much as it does, would you have come anyway?" Seventy percent of the students in the survey indicated that they definitely would have come anyway if they had known how much it cost. This question implies the possibility that the costs of attending the school might be higher than anticipated by the student before he enrolled. Some of the students wrote comments which indicated that, in their opinion, at least, the costs of attending school were not higher than anticipated:

* * *

> It really doesn't cost that much.

* * *

> I didn't think it was expensive at all. I thought the charge was rather small.

* * *

> I knew how much it cost.

* * *

Discussion

The data on Financial Information suggests that finances are not a major obstacle for most students attending Area schools. However, certain student needs emerge from the information presented. For example, one quarter of the students in the survey indicated that they needed assistance in finding a part-time job to help pay expenses.

The 1968-1970 brochure for Minnesota's Area Vocational Technical Schools indicates that four kinds of financial help are available to students in the Area schools. These are part-time employment, work-study, student loans, and the G.I. Education Act. Regarding part-time employment, the brochure makes this statement:

> There may be opportunities for part-time employment in the various communities. Students may receive help to find part-time jobs by contacting the area school director.

Moreover, federal monies were made available under the Vocational Education Act of 1963 to assist states in providing part-time employment to youths who need the salary from such employment in order to continue their vocational training on a full-time basis (Anderson, et al., 1968, p. 8). More recently, Public Law 90-576, passed by the Congress on October 16, 1968, and entitled "Vocational Education Amendments of 1968," repeats this emphasis clearly (p. 1):

> It is the purpose of this title to authorize Federal grants to States to assist them to . . . provide part-time employment to youths who need the earnings from such employment to continue their vocational training on a full-time basis. . . .

Provision is also made under the Vocational Education Amendments of 1968 for the development of a work-study program for vocational students (p. 26). Enrollment under this work-study program is to be furnished only to those full-time enrollees in vocational education who are "in need of the earnings," who meet the age requirements, and who are "capable, in the opinion of the appropriate school authorities, of maintaining good standing in his vocational educational program while employed under the work-study program."

The Area schools in Minnesota do assist some students in finding part-time employment. However, it would appear that students desire additional assistance in this respect, and that greater efforts can be made in providing part-time employment for some students and work-study opportunities for others.

A number of student services are involved in providing assistance to students who need financial help through part-time employment. With regard to the work-study program, the school is charged with the responsibility of identifying those students in need of earnings and capable of maintaining a good standing in their program while employed under work-study. In addition, the guidance and counseling functions of the Area school can contribute to the identification or development of kinds of employment which are most likely to provide a beneficial vocational experience, thus providing a desirable bonus over and above monetary gain alone.

Responses of students in the survey indicated that one third of the students were working 20 or more hours per week. Most of the Area schools in Minnesota require that students attend class for six hours per day for a total of 30 hours per week. Thus, a full-time student who is working 20 hours per week is normally committed to a schedule that requires 50 hours of his time per week, plus any additional time which may be required for study outside of school. A student who is working 40 hours per week is likewise committed for 70 hours per week, plus any study time which may be required. The schedule which a student is able to handle will vary from person to person. However, it is likely that for some students, the quality of their educational experience will decrease when employment consumes too large an amount of their committed time.

The question of recommended limits to outside employment for full-time students is of relevance to the educational program in the Area schools and additional research on this subject is needed. The Vocational Educational Amendments of 1968 (p. 26) states that under the work-study program, no student shall be employed for more than fifteen hours in any week in which the classes in which he is enrolled are in session. This may also represent a desirable limit for most students who have part-time employment not covered by work-study. However, the amount of time a student is able to spend in outside employment may well bear a relationship to his specific abilities, his physical health and stamina, and his family and other responsibilities. These factors may be found to be relevant to the success and satisfaction which a student experiences in his course of studies in an Area school.

There is no charge for tuition an any of the Area schools of Minnesota to persons who begin study before their 21st birthday and who are residents of the state. Thus, for approximately 85 percent of the students in the survey, tuition in the Area school is free. However, only about half of the students in the survey indicated that they were living with their parents. For many students, then, expenses such as room, board, clothing, transportation, books and equipment, and personal needs must be considered. Nearly one half of the students indicated that they were having no trouble getting enough money to make it through school. For the others, who appear to be having some difficulty, various kinds of assistance might be offered. For example, some students might benefit from learning to plan a personal budget, while others may need more direct help in the way of scholarships, loans, or assistance in finding part-time employment.

SCHOOL INFORMATION

Questions 24-31

Table 7, Appendix A, gives the number and percent of all students in the survey who marked each response concerning School Information. Appendix B presents the listing of observable differences of ten percent or more between male and female students. Appendix C presents the listing of observable differences of ten percent or more between the responses of students in the eight selected occupational programs and those of the total student population.

Two questions in the section on School Information were subjected to chi square analysis. They are questions 27 and 30. Chi square values for these questions are presented in Appendix D. For these two questions, no observable differences will be presented in the text of this report which are not also statistically significant. However, differences of less than ten percent which are statistically significant, will sometimes be presented to aid in the interpretation of these questions.

Question 24 asked: "How did you find out about this school? Mark all which apply." The most frequently marked response to this question was: "A high school counselor suggested it to me," with 41 percent of the students in the survey marking this response. Thirty-five percent of the students indicated that friends or relatives had told them about the school, and 31 percent indidicated that they had found out about it by themselves. Nurses (49 percent) were more likely than either all women (28 percent) or all students questioned (35 percent) to indicate that friends and relatives had told them about the school; while machine operators (21 percent) were less likely than other students to mark this item. Forty-five percent of the machine operators indicated that the State Employment Agency had recommended the school as compared with four percent for the total student population.

In their written comments, students indicated other ways in which they had found out about the school:

* * *

> I found out about it from Career Day when I was
> a junior in High School.

* * *

> I believe that I heard it on T.V. first.

* * *

> Youth Opportunity Center.

* * *

> I read the advertisement in the paper.

* * *

> I applied to another school after it was full and
> they told me to try here.

* * *

More than half of the students had visited the school before enrolling. When they visited the school, 32 percent talked with the Director or Assistant Director, 24 percent talked with an instructor, and 20 percent talked with a counselor. Nurses (40 percent) were less likely than either all women (50 percent) or all students (56 percent) to have visited the school before enrolling. Fifty-eight percent of the heavy equipment operators and 45 percent of the machine operators talked with a counselor when they visited the school, while only 9 percent of the nurses did so. In addition, 45 percent of the heavy equipment operators, but only nine percent of the machine operators, indicated that they talked with an instructor when they visited the school.

Many responses were marked in answer to Question 27: "What is there about this school that makes it a good school for you? Mark all which apply." Most frequently marked was (0) "Here we study only what we need to know, not things like poetry and history" (58 percent), followed closely by (8) "There is no charge for tuition here" (56 percent), and (2) "If you go here, you can get a job when you finish" (44 percent). Two responses were marked very infrequently by the students: (5) "They have a good extra-curricular program here" (five percent), and (6) "They have a good schedule of social events here" (four percent). The fact that so few students marked these responses might be interpreted to indicate that extra-curricular and social activities are not available to students in many or perhaps most of the Area schools. However, it is also possible either that these services exist but that students are not aware of them or taking advantage of them, or else that other items in the question seemed more important to the students.

Each response of Question 27 was subject to chi square analysis, and for responses (2), (4), (5), and (9), no statistically significant differences were found. Response (0) "Here we study only what we need to know, not things like poetry and history," was marked more frequently by secretarial students (65 percent), and less frequently by practical nurses and cosmetologists (each 47 percent) than by the total student population (58 percent). Hoyt (1968B) had identified this response as typical of the specialty oriented student and indicated that 50 percent or more of the students in any group to which he had administered his questionnaire always marked this response. It is interesting to note, then, that two groups in this survey fall slightly below the 50 percent figure. However, Hoyt offered only six alternatives for the question in which this item appears, while ten were offered in this survey, which may account for the slight difference which exists.

Response (1) "Here they have the equipment the other schools just don't have," was marked more frequently by men (42 percent) than by women (33 percent). Heavy equipment operators (75 percent) and electronics students (47 percent) marked this response more frequently than did the total student population (39 percent); while nurses (11 percent) and cosmetologists (21 percent) marked it less frequently. Response (3) "Here the instructors know what they are talking about," was marked more frequently by men (43 percent) than by women (32 percent), with clerical (24 percent) and secretarial students (28 percent) each marking it less frequently than the total student population (40 percent).

Response (6) "They have a good schedule of social events here," was chosen by only four percent of the total student population and by one percent of the electronics students, but by nine percent of the clerical students. Response (7) "It's close to home," was marked more frequently by women (44 percent) than by men (34 percent). Secretarial (46 percent) and nursing students (47 percent) marked it more frequently than did the total student population (37 percent); while machine and heavy equipment operators (each 12 percent) marked it less frequently.

Response (8) "There is no charge for tuition here," was chosen by 60 percent of the women, and by 54 percent of the men. This is perhaps a reflection of the fact that more of the men were

21 years of age or older and, hence, subject to tuition costs. Eighteen percent of the machine operators, and 69 percent of the secretarial students marked this response, as compared to 56 percent for the total student population.

Many of the written comments of the students for this question were highly favorable, and as might be expected, a few were unfavorable. Several of the comments are presented here:

* * *

> You can take the same courses offered in a two-year college in one year.

* * *

> Have had my general ed. in college. Studying drafting here.

* * *

> I like the way the school is run so smoothly and it's so clean and neat.

* * *

> Why don't they treat us like adults instead of children. Even the washrooms are marked "BOYS" and "GIRLS".

* * *

> Machines are shot. Unqualified instructors.

* * *

> No other school would accept me at my age or marital status.

* * *

> Interesting no other clases [sic] like history.

* * *

> My interest was Machinist and this was the only school that I thought would give me a good job in the future. Because of former students who graduated and are still making a good living from this trade.

* * *

> Our class is small enough to get extra help if necessary.

* * *

> You get taught tech. knowledge that isn't available except as an apprentice.

* * *

Four questions pertained to study habits, quality of high school preparation, and ability to learn in the courses the students were taking. Question 28 asked whether or not the student had to study after school in order to keep up with his classwork. Thirty-four percent of the students indicated that they sometimes studied after school, but not often, while 46 percent indicated that they usually or always studied after school.

A large number of observable differences between groups were found for Question 28. Twenty-two percent of the men, but only four percent of the women responded that they did all of their work at the school. Each of the selected occupational programs responded in the direction indicated by the predominant sex in their program except for the electronics students, only 9 percent of whom stated that they did all of their studying at school. Thirteen percent of the men and 25 percent of the women stated that they always had to study after school. The occupational programs tended to follow the pattern for their own sex on this response, too, with the extremes being heavy equipment (zero) and nursing (50 percent). Sixteen percent of the electronics students marked this response which was identical with that for the total student population.

Thirty-two percent of the students thought that their high school education had prepared them "very well" for the things they were studying now, and 45 percent felt that their high school education had prepared them "fairly well." However, 45 percent of the secretarial students thought that their high school education had prepared them "very well" for their present studies, and 56 percent of the clerical students and 32 percent of the cosmetologists thought that they had been prepared "fairly well." Thirty-eight percent of the heavy equipment operators thought that their high school education had been poor preparation for their present studies, as compared with 21 percent for the total student population.

A few student comments which express individual attitudes towards their high school preparation are presented here:

* * *

> My high school subjects would have helped much more, but I didn't study enough.

* * *

> I took all college courses in high school.

* * *

> My school didn't have good counseling. I didn't take right classes.

* * *

> I probably could have been better prepared for a course like this if I had finished high school.

* * *

> I never attended high school but my lifelong interest in this area has motivated me to do reading on it and my work experience has helped me.

* * *

> There are some courses I wish I would have taken in high school—more math, physics.

* * *

Question 30 asked "What things do you find that are especially hard for you to do in the courses you are taking? Mark all which apply." Twenty-nine percent of the students found math especially difficult, and 22 percent had difficulty in explaining themselves to others, but 44 percent indicated that none of the work was especially hard. This question has ten discreet responses, each of which was subjected to chi square analysis. Although eleven observable differences of ten percent or more were found for this question, there are 35 statistically significant differences for the same question.

Math was difficult for machinist (30 percent) and clerical students (33 percent), but not for the cosmetologists (two percent). Electronics students (15 percent) indicated some difficulty with reading, while secretarial students (five percent) had very little. Writing answers to questions was more difficult for electronics students (16 percent) and nurses (15 percent), than for the total student population (10 percent). Women (29 percent) were more likely than men (19 percent) to indicate that they were having difficulty in explaining what they wanted to say, and on this skill, machinist (13 percent), clerical (35 percent), secretarial (28 percent) and nursing students (33 percent) all followed the trend for their own sex. Understanding the technical language was more of a problem for women (18 percent) than for men (11 percent). Machinists (seven percent) had less difficulty than the total student population (13 percent) with technical language, while electronics students (18 percent) and nurses (23 percent) had more.

Men (seven percent) found layout and drawing more difficult than did women (two percent) and students in all eight selected occupational programs tended to follow this trend. Women (six percent) had more difficulty than men (three percent) with hand skills, with secretarial students (eight percent) and cosmetologists (16 percent) marking this response more frequently than the total student population (four percent). Men (46 percent) were more likely than women (40 percent) to indicate that none of the work was especially hard. This opinion was shared by the heavy equipment operators (68 percent) and the cosmetologists (55 percent). However, electronics (36 percent), clerical (36 percent), and nursing students (34 percent) were less likely than the total student population (44 percent) to indicate that none of the work was especially hard.

Student comments regarding this question include the following statements:

* * *

> Understanding the technical language because I don't sometimes get what they want by the questions.

* * *

> Keeping interested for 6 hours.

* * *

> I would need to study no matter what I did but this does not seem unreasonably difficult.

* * *

A male student, who indicated that he worked more than 50 hours a week, made this comment regarding things he considered especially difficult:

* * *

> Getting to school on time staying Awake in school.

* * *

It is interesting to speculate as to why women (29 percent) should be more likely than men (19 percent) to indicate that they were having difficulty in explaining themselves, since a superiority in verbal ability is frequently attributed to females. Tyler (1965) discusses the consistent differences in verbal ability which appears in psychological studies of males and females (p. 244):

> From infancy to adulthood, females express themselves in words more readily and skillfully than males. Throughout the grades and high school, they obtain higher scores on verbal sections of intelligence tests and do better work in English courses.

Why, then, should "explaining what I want to say" be especially hard for almost 30 percent of the women in this survey?

One plausible explanation is that, while women in the survey may perhaps possess superior verbal ability as compared with men in the survey, they are more likely to show concern for how they express themselves and, hence, to mark this item. It would appear that on this item, it is not a lack of ability which is at issue, but rather the relative importance of that ability to the individual student. Thus, when 13 percent of the machinists and 28 percent of the secretarial students marked this item, we assume, not that machinists have more ability in explaining themselves, but rather that they show less concern regarding it.

An explanation such as this would tend to fit in with certain of the responses to other items in Question 30 regarding things that seemed "especially hard" for students in the survey; there seems to be a tendency for students to indicate as difficult those skills which are of some relevance to their program of study. Machinists, for example, were sometimes concerned with math, cosmetologists with hand skills, and electronics and nursing students with learning the technical language. Certain of the responses to this question may perhaps be best explained, then, not as indicating the actual amount of ability which the student possesses, or even the difficulty of the subject matter, but rather as an expression of the relative importance of that skill to the student and the concern which he may have regarding his performance of that skill.

Question 31 asked: "How do you judge your own ability to learn in your classes?" Seventy-three percent of the students in the survey judged their own ability to learn as "average." For the selected populations under consideration, between 76 and 80 percent of each population, except one, saw themselves as average in their ability to learn in class. The one exception was the heavy equipment operators, 45 percent of whom saw their ability to learn as "high," with the other 55 percent indicating that they thought their abilities were average.

The specified requirements for entrance into the program of Heavy Equipment Operation and Maintenance are the physical capability for handling the equipment and mechanical aptitude. A high school course in Industrial Arts is helpful, but not required. No stated requirements are set as to intellectual ability. Two thirds of the heavy equipment operators in this survey indicated that none of the work was especially hard, and, thus, their tendency to rate their ability to learn as high may be more a function of the content of the course than an accurate rating of their own ability.

SOCIAL AND RECREATIONAL

Questions 32-37

Table 8, Appendix A, gives the number and percent of all students in the survey who marked each response concerning Social and Recreational information. Appendix B presents the listing of observable differences of ten percent or more between male and female students. Appendix C presents the listing of observable differences of ten percent or more between the responses of students in the eight selected occupational programs and those of the total student population. None of the questions regarding social and recreational information were subjected to statistical analysis.

Presentation of Data

More than half of the students (55 percent) thought that there was a friendly relationship among the students in their school. Machine operators (73 percent) were more likely than the total student population to indicate that they thought there was a friendly relationship among the students; while the practical nurses (44 percent) were less likely to mark this response.

Forty-one percent of the students in the survey indicated that "all" of their instructors knew them well. Thirty-three percent of the women and 44 percent of the men marked this response, with machine operators (76 percent) and cosmetologists (54 percent) marking this response more frequently than other students in the survey. Thirty-four percent of the total student population indicated that "most" of their instructors knew them well, with clerical (51 percent) and secretarial (47 percent) students being more likely to mark this response. Thirteen percent of all students in the survey indicated that about half of their instructors knew them well and that about half didn't, while eleven percent indicated that most of their instructors didn't know them very well.

A few of the student comments regarding this question are presented here:

* * *

> Knows us by name and face but does not understand us.

* * *

> We only have one instructor.

* * *

> They know us as well as could be expected.

* * *

> He thinks he does, but I don't let him know me.

* * *

Fifty-nine percent of all students in the survey indicated that their close friends did not attend their school, while about half of the students indicated that their close friends lived in the town or area in which the school was located. Clerical students (48 percent) were less likely than the total student population to indicate that their close friends did not attend their school;

while the nurses (78 percent) marked this response more frequently than other students. Sixty-seven percent of the machine operators and 88 percent of the heavy equipment operators indicated that their close friends lived in their home town rather than the area in which the school was located. This compares to 46 percent for the total student population, while only 33 percent of the electronics students marked this response.

Question 34 asked: "What kinds of activities would you like to see provided by the school or the town in which you are now living? Mark all which apply." In answer to this question, about half of the students in the survey marked the responses "Recreational sports" (50 percent) and "Dances" (45 percent), while some 38 percent indicated that they would like to have competitive sports and 34 percent requested movies.

Women (55 percent) were more likely than men (41 percent) to indicate that they would like to have dances, and cosmetology (63 percent), clerical (59 percent), and secretarial students (56 percent) all marked this response more frequently than other students. Women (58 percent) were more likely than men (47 percent) to indicate that they would like recreational sports. Heavy equipment operators (63 percent) and nurses (61 percent) marked this response more frequently than did the total student population. Men (43 percent) were more likely than women (25 percent) to indicate a desire for competitive sports.

Women (31 percent) were more likely than men (19 percent) to indicate that they would like to have clubs, with the responses of clerical (35 percent) and secretarial students (36 percent) being typical of this trend. The same trend held for a student newspaper. Twenty-four percent of the women and eleven percent of the men marked this response, with clerical and secretarial students (each 29 percent) being the most likely to mark this response. Students of cosmetology (28 percent) were more likely to indicate that they would like to have a yearbook, as compared to 15 percent for the total student population.

Suggestions and comments regarding social and recreational events include the following:

* * *

> Provide a recreational center where you can dance
> or play pool—ping pong etc.

* * *

> A supervised dragstrip.

* * *

> A club for those interested in cars.

* * *

None I came Here to Study and Learn Not a Sunday School Picnic.

* * *

Singing and musical get togethers.

* * *

Bowling.

* * *

None since I've got two children to keep me busy.

* * *

I can't ask for more than what is provided.

* * *

We have all these things.

* * *

Discussion

In the preceding section of this monograph, the question was raised as to whether or not the Area schools were providing enough social and recreational opportunities for their students. The responses to Question 33 are perhaps the best available measure as to whether or not students thought that sufficient activities were available in the school and in the town in which they were living. Forty-seven percent of the students in the survey indicated that there was always something to do in their spare time. Thirty percent indicated that some social and recreational activities were available, but that they wished there were more; 64 percent of the machine operators marked this response. Twenty-two percent of the students in the survey indicated that there was never anything to do in their spare time, with 38 percent of the heavy equipment operators marking this response.

Thus, it would appear that, while about half of the students always had something to do in their spare time, the other half never had anything to do, or wished that there were more activities. It would seem then, that the school and the local community were providing recreational activities to a larger degree than might have been supposed from an examination of the data in the preceding section, but that consideration might be given to the possibility of increasing efforts in this direction. Further study, not included in this survey, might perhaps indicate that this need was greater for schools located in small towns, rather than for metropolitan schools. It is also possible that students who are now living away from home, as, for example, the heavy equipment operators, are more in need of planned recreational activities than are students who live at home. These are possibilities that each school might explore individually in terms of its own program and student population.

It should be noted that for Question 34, which asked the kinds of activities that students would like to see provided for them, that the women in the survey were more likely to mark the item than were the men, on every item except "Intramural activities" and "Competitive sports." However, for Question 33, which asked whether enough recreational activities were provided, women showed a slight tendency (52 percent vs. 45 percent) to be more likely than the men to indicate that they always had something to do in their spare time. These differences are relatively small. However, they would tend to indicate that women may be more concerned as to whether social and recreational activities are available, as well as to be sightly more skillful in providing themselves with spare time activities. If this is an accurate interpretation of the data, it suggests the possibility of recruiting women as volunteers from among the student body to plan and carry through certain of the social and recreational activities of the school, as it appears that women are not only more interested in seeing that such activities take place, but also that they may have a larger number of usable suggestions for social activities.

Only ten percent of the students in the survey responded "Yes" to question 36: "Do most of your close friends attend this school?" This response, together with other responses examined in this survey tend to indicate that some methods must be devised in order for students to become acquainted with one another in other than a classroom situation. One way that this can be done, of course, is through social activities. Architect Richard Jones (1969) has suggested another means of encouraging interaction between students:

> Historically, probably the greatest lack in the development of buildings for vocational education is in the realm of gathering places for the students—public places where they can spend their free time socializing, relaxing, or just "hanging around." The space need not be grand, but it does need to be existent. This is the space that is long remembered by the student after he leaves school. It is reminiscent of the village square.

Area schools should consider the importance of providing space within their buildings for students to congregate in an informal fashion. When new buildings are designed, this space can be planned into the structure of the building, and those schools which are using buildings that perhaps were built for some other purpose than an Area school should consider the importance of designating an area within the building as a meeting place for students.

CAREER PLANS

Questions 38-52

Table 9, Appendix A, gives the number and percent of all students in the survey who marked each response concerning Career Plans. Appendix B presents the listing of observable differences of ten percent or more between male and female students. Appendix C presents the listing of observable differences of ten percent or more between the responses of the students in the eight selected occupational programs and those of the total student population.

Four questions in the section on Career Plans were subjected to chi square analysis. They are questions 38, 43, 49, and 50. For these four questions, no observable differences will be presented in the text of this report which are not also statistically significant. However, differences of less than ten percent which are statistically significant, will sometimes be presented to aid in the interpretation of these questions.

The section on Career Plans was the longest section in the questionnaire and attempted to gain a variety of information from the students. Students were asked questions relating to the difficulty of occupational choice, their sources of information about the training program in which they were enrolled, their satisfaction with career choice and training program, their estimate of the probability of finishing the program and finding employment, and whether or not parents and spouses approved of their choice.

Presentation of Data

Question 38 asked: "How much trouble have had in choosing a definite area of training?" The responses indicated that 40 percent of the students had experienced "some" difficulty in choosing an area of training, and twelve percent had "a great deal" of trouble; while nine percent marked the response "I still haven't decided." The remainder, or approximately 38 percent of the students indicated that they had "very little" trouble in choosing a definite area of training.

This question was submitted to the chi square analysis and five statistically significant differences were found. Although the responses to this question were considered to be on a continuum, and the chi square for each population was calculated as a unit, the results can best be interpreted by inspecting the specific responses for each of the five populations for which a statistically significant difference was found. The men tended to have slightly more trouble than the women in choosing a career. Thirteen percent of the men and nine percent of the women indicated that they had a great deal of trouble; while 37 percent of the men and 40 percent of the women said that they had very little trouble in choosing a definite area of training. Seventeen percent of the electronics students indicated that they had a great deal of trouble, as compared to 12 percent for the total student population. Fifty-one percent of the clerical students indicated that they had some trouble, as compared to 40 percent for the total student population. Only 26 percent of the clerical students indicated that they had very little trouble, as compared to 38 percent for the total student population. However, 70 percent of the nurses and 58 percent of the cosmetologists indicated that they had very little trouble in choosing a career.

A few of the students' comments on this question give additional information regarding career choice:

* * *

> My disability made a selection difficult.

* * *

> There were only two courses I could get into when I came so I did not have much choice.

* * *

> Being my desired course was filled up I took something instead of sitting around.

* * *

> Should have had counselor in high school—more subjects to do in what your intrested [sic] in.

* * *

Although over half of the students in the survey had experienced difficulty to some extent with career choice, 94 percent of the students indicated that they had not changed courses since enrolling in an Area school. Moreover, 75 percent of the students in the survey indicated that they did not plan on changing courses in the future, and an additional 14 percent indicated that their school does not permit course changes. Female students (84 percent) were more likely than male students (72 percent) to indicate that they did not plan on changing courses, with secretarial students (87 percent) being more likely than any of the other selected occupational groups to mark this response. A male student made this comment:

* * *

> If you change courses the draft will get you and hello Viet Nam.

* * *

Question 43 asked "How definite is your present choice of occupation?" Thirty-five percent of the students in the survey said that their present choice was "very" definite, while another 46 percent said that it was "fairly" definite. This question was submitted to chi square analysis and four statistically significant differences were found. Women were more likely than men to indicate that their choice was very definite (39 percent vs. 34 percent), while men were slightly more likely to indicate that their choice was fairly definite or somewhat indefinite. Seventy-seven percent of the practical nurses, and 60 percent of the heavy equipment operators, but only 23 percent of the clerical students, indicated that their occupational choice was very definite.

Question 42 asked "Where did you receive information about the training program you are in? Mark all which apply." Forty-two percent of the students in the survey had received information about their training program from a high school counselor, 38 percent from reading about it, and 33 percent from friends and relatives. In response to this question, 51 percent of the women and 33 percent of the men indicated that they had obtained information by reading about it. The students in each of the selected occupational programs tended to follow the trend for their sex on this response, with machine operators (18 percent) being the lowest for the men, and practical nurses (59 percent) being the highest for the women. Heavy equipment operators (55 percent), clerical students (58 percent), and cosmetologists (56 percent) were higher than the total student population (42 percent) in indicating that they had received information from a high school counselor. Machine operators (30 percent) were more likely than the total student population (20 percent) to indicate that the vocational counselor at the Area school had given them information, while nursing and cosmetology students (each 51 percent) were more likely than the total student population (33 percent) to indicate that friends and relatives had told them about it.

Question 41 asked: "How much did you know about your present training program before you started it?" Twenty-one percent of the students in the survey indicated that they knew quite a bit about it, 53 percent that they knew a little bit, but really not very much, and 25 percent that they didn't know much about it before they began the program. It would appear that the nursing students were better informed than students in the other populations under consideration, since 42 percent of the practical nurses indicated that they knew quite a bit about their present training program before they enrolled in it.

Students were asked how satisfied they were with the training program in which they were enrolled. Fifty-five percent of the students in the survey indicated that they were very satisfied; 41 percent marked the response "It's not too bad, but I guess it could be better in some ways," and four percent indicated that they were very dissatisfied. However, 72 percent of the nursing students indicated that they were very satisfied with their training program.

Some of the comments to this question appear to have been written by students who were somewhat dissatisfied with their program:

* * *

> Could use newer equipment and tools, more research, more room, instead of surplus equipment.

* * *

> The course should be longer for better detailed study instead of rushing through.

* * *

> The basic program is good, but there is a shortage of equipment.

* * *

> The instructor can't teach very well.

* * *

Students were asked whether they thought they would enjoy working on the job which they were planning to enter. Eighty-one percent of the students in the survey replied in the affirmative, while only three percent gave a negative reply; 16 percent answered "Maybe" to this question. However, 98 percent of the nursing students marked the affirmative response: "Yes, I think I will like it a lot." An electronics student made this comment:

* * *

> I better after going to school and all of that stuff.

* * *

Other student comments include these:

* * *

> I think after I'm working in this field a few months I will come to enjoy it.

* * *

> I have found that I enjoy some parts of study more than others, therefore when I'm on the job, I enjoy doing some things more than others.

* * *

Sixty-one percent of the students in the survey thought their chances of finishing the course in which they were enrolled were "excellent," and another 29 percent thought they they were "good." Eighty-three percent of the heavy equipment operators and 79 percent of the secretarial students, but only 54 percent of the nurses, indicated that they thought their chances of finishing the course were excellent. Some of the men in the survey made written comments regarding the effect of military obligations upon their plans for finishing the course:

* * *

> Unless I get drafted first but I would like to finish before that.

* * *

> I plan to last out this year but I will be joining the Navy quite soon . . . I won't be here the second year.

* * *

Question 49 asked: "If you could be doing just as you wished ten or twelve years from now, would you be doing the job you are now preparing for?" Forty-six percent of the students in the survey responded "Yes" to this question, 15 percent responded "No" and 38 percent marked the response "Unsure." Each response to this question was submitted to chi square analysis and twelve statistically significant differences were found. Men (47 percent) were more likely than women (42 percent) to respond "Yes" to this question. Fifty-five percent of the electronics students and 75 percent of the nursing students answered this question in the affirmative, while only 28 percent of the clerical and secretarial students did so. Clerical and secretarial students (each 48 percent) were more likely than other students in the survey to mark "Unsure" to this response, while the practical nurses (19 percent) were less likely to mark it.

In response to this question, an engaged girl made this statement:

* * *

> I would like to work awhile, have a family and start working again later on.

* * *

Other student comments concerning this question include the following:

* * *

> In this world things change a lot in ten or twelve years.

* * *

> I would go to college, and be teaching by that time.

* * *

> Along with advancements in the same field.

* * *

> Yes but at higher level.

* * *

> I plan to get a Civil Engineering degree at college.

* * *

Question 50 asked the student how hard he thought it would be to line up a job when he has finished his training. Some 79 percent of students in the survey thought that they would have little or no difficulty in getting a job when their training program was finished. This question was subjected to statistical analysis and the responses were considered to be on a continuum. Six statistically significant differences were found. Men (20 percent) were more likely than women (11 percent) to indicate that they already knew where they would be working; while women (24 percent) were more likely than men (16 percent) to indicate that they thought it might be somewhat difficult to line up a job. Machinists (23 percent) and nurses (28 percent) were more likely than the total student population (18 percent) to indicate that they already knew where they would be working. Clerical (38 percent) and secretarial (27 percent) students were more likely than the total student population (18 percent) to indicate that they thought it might be somewhat difficult to get a job when they had finished their training. Several student comments are presented here:

* * *

> I don't want to go into this phase of Electronics.

* * *

> Difficult because of the draft board, army will take me.

* * *

> Everybody wants a guy to have experience and nobody wants to give him a chance to get some.

* * *

> We don't really know what to expect and are very apprehensive.

* * *

> They don't want to hire you if they know you are going to get drafted.

* * *

When asked whether their home town had opportunities for employment in the kind of work for which they were training, 41 percent of the students in the survey indicated that they thought it did, while 36 percent indicated that it did not. Seventy-two percent of the nurses, 56 percent of the cosmetologists, and 53 percent of the heavy equipment operators responded "Yes" to this question; while only 25 percent of the clerical and 24 percent of the secretarial students did so. Forty-seven percent of the electronics students responded "No" to this question. Thirty-three percent of the clerical and 34 percent of the secretarial students indicated that there were a few jobs, but not many in their home town, as compared to 22 percent for the total student population.

Fifty-six percent of the students in the survey indicated that it would be no trouble for them to have to move out of town in order to find a job. Seventy-three percent of the heavy equipment operators, but only 42 percent of the machine operators, indicated that it would be no trouble for them to move out of town to find a job. Secretarial and nursing students (each 22 percent) were less likely than the total student population (34 percent) to indicate that it would cause them some trouble if they had to leave town to work.

Question 47 asked whether parents approved of the student's choice of training program. Seventy-six percent of the students in the survey indicated that their parents approved of their choice, but 88 percent of the nursing students indicated parental approval. A few students' comments regarding parental approval are presented here:

* * *

> It does not concern my parents I am my own keeper.

* * *

> My being 35, they aren't too concerned.

* * *

> They want me here I don't want to be here I want to be in college.

* * *

> I don't know what they think. I believe I'm old enough to think for myself.

* * *

A similar question was included concerning approval of wife or husband of choice of training program. While 83 percent of the students in the survey marked the response "I am not married," only 36 percent of the machine operators marked this response. The number who indicated either that their spouse did not approve or was indifferent to their career choice was very small for all groups. Two of the written comments which appeared in response to this question are presented here:

* * *

My fiance thinks it's a wonderful program!

* * *

I have a girl friend. She thinks it's great.

* * *

An open ended question with no coded responses was included at the end of the section on Career Plans. It reads: "What have you found are some of the problems in choosing the kind of work that you want to do?" A few of the written responses of students are presented here:

* * *

> The basic problem is a fear that I won't succeed in the areas that I'd like to go into.

* * *

> The biggest problem had to be facing it with myself. I've always wanted to teach, but I'm learning to like this better.

* * *

> I've found that I have to weigh my interests against the financial security, availability, etc.

* * *

> The pay scale is so low that I will have a problem of making ends meet. It wouldn't be quite so hard if I didn't have three daughters to support.

* * *

> I know I am qualified, but I'm afraid I'll do something wrong. I'm not sure if I'll like this profession, and since I'll be doing it for a long time, I'm doubtful, it is a good course though.

* * *

> I think the hardest is the first time you go out for a job interview.

* * *

> The main problem is finding a place where I want to work location wise.

* * *

> If it will Interest you the rest of your life.

* * *

> Not being able to decide for yourself and when I do decide my parents not going along with my decision.

* * *

> Low on capital for farming but I'll make it a go.

* * *

> I couldn't get in the course I had planned because it was full when I came to sign up.

* * *

> I am not sure I am suited mentally for the type of work.

* * *

> Where you can find a job salary compared with other occupations climate willing. I would like to work out side in winter time.

* * *

> If I will like it, does it pay good, is it dangerous, this such as this [sic].

* * *

> The decision of working for a big company as a "worker," or for a small business as a "person."

* * *

> The Service causes a great deal of trouble.

Discussion

How do we evaluate the responses of students to questions regarding career choice? What implications do these responses have for persons concerned with student services in the Area schools of Minnesota? In what ways can students be assisted as they make vocational decisions? There are not easy questions, but their answers have implications for the individual student, the school, and the community. In this section, a brief overview of the findings regarding student concern with career choice will be presented in summary fashion. Because of the importance of this topic, the subject of career guidance for all persons within the community will be discussed in greater detail in Chapter V.

The Difficulty of Career Choice: A review of the responses of students to questions regarding vocational choice would tend to indicate that the process of career choice is, by any standards, a difficult one. Over half of the students in this survey indicated some degree of difficulty in making a career choice, while nine percent of the students, although already enrolled in a training program in an Area school, indicated that they were still undecided regarding career choice. About 18 percent of the students indicated that their present choice of occupation was either "somewhat" or "very" indefinite. Although the responses tended to indicate that men were more likely than women to experience difficulty in making a career choice, it should be noted that both the clerical and the electronics students had expressed more difficulty with career choice than did the other students in the survey. In addition, the written responses to the open-ended question indicated the variety of considerations that may be of concern to specific individuals as they are involved in the process of vocational choice.

Information About Training Programs: In this section of the survey, students were asked where they had received information about the training program in which they were enrolled. The response marked most frequently was "From my high school counselor," with 42 percent of the students in the survey marking this response. This figure is considerably larger than that obtained by Hoyt (1968 B), who found that fewer than one-fourth of the students in his study reported that their school counselor had visited with them about attending a specialty school. It would be interesting to inquire as to those aspects of the educational system in Minnesota which have contributed to this greater awareness on the part of high school counselors regarding vocational education. In any case, it would appear that high school counselors are aware of the offerings of the Area schools and are informing students of training opportunities open to them.

Other sources of information about the Area schools, as indicated by the responses of students in the survey, were "From reading about it," 38 percent, and "From friends and relatives," 33 percent. These figures tend to indicate that the Area schools are doing an effective job of informing the general public of the training programs available in the Area schools. However, when asked how much they knew about their present training program before they began it, less than one-quarter of the students indicated that they knew quite a bit about it before they signed up. This response would tend to indicate that potential students, together with counselors, family, friends, and the general public, should continue to be supplied with information about the programs of the Area schools.

Indicators of Satisfaction with Training Program: Several questions appeared in the section on Career Plans which could be viewed as indicators of student satisfaction with their training program. Although certain important areas of information are lacking in this survey, the general impression one gets is most favorable: students tend to be quite satisfied with their training program and their school. Such expressions of satisfaction, however, must never become the occasion for lethargy on the part of those responsible for student services within the school.

The data collected in this section indicates that only six percent of the students in the survey had changed courses since being enrolled in any Area school, and that 75 percent did not plan on changing courses. An additional 14 percent indicated that their school does not permit course change. Such figures indicate student satisfaction. However, they can also be interpreted to indicate that at the present time in the Area schools of Minnesota, the training which a student receives will in all probability be that of the course in which he began. Thus the need for skilled counseling before the student enrolls in a given course is emphasized.

The question which asks specifically regarding student satisfaction with their training program again yields favorable results: 55 percent of the students indicated that they were "very" satisfied with their training program, while only four percent indicated that they were "very" dissatisfied. Questions regarding the approval of parent or spouse for the student's choice of training indicates that relatives of students are clearly in favor of the program chosen by the student.

In addition, 61 percent of the students in the survey indicated that they were sure that they would finish the course in which they were enrolled, a response that can be interpreted to indicate, not only satisfaction with the course, but also a genuine suitability of the program for the student. However, the fact that only six percent of the students indicated that they had changed courses since being enrolled in any Area school can also be interpreted to indicate that when a student finds that his course of training is unsatisfactory to him, he is more likely to withdraw from the school than to change to a more appropriate course.

The questionnaire used in this survey was administered in the spring of the year. We do not know how many students had actually withdrawn during the school year, prior to the administration of the questionnaire, but we do know that course change had been relatively infrequent. Research is needed in order to determine the percentage of students who withdrew before completion of their training program. In addition, information is needed as to whether either poor selection procedures, or the inflexibility of the program may be significant causes of student dropouts.

Placement: Although 80 percent of the students in the survey indicated that they anticipated little or no trouble in lining up a job when they were finished their training, the clerical and secretarial students were more likely than other students in the survey to indicate that they thought that it might be difficult to find employment. The Area schools in Minnesota take great pride in placing students who successfully complete their course of training. The brochure "Minnesota's Area Vocational Technical Schools: 1968-1970" answers this question:

> Does the school help you in finding a job?
>
> Yes! The area school will assist persons in securing employment upon acquiring employable skills. Schools maintain close contacts with industry and the Minnesota State Employment Services. Every effort is made to inform students of work opportunities which will make best use of the students' capabilities. In the past, over 94 percent of the students available for employment have been placed on jobs.

Moreover, the occupational outlook for workers in the clerical and secretarial fields is rather good (Wirtz, 1966). Anderson, et al. (1968) makes this statement (p. 19):

> The clerical and kindred workers occupational group, which includes such common occupations as bookkeeper, office machine operator, secretary, and typist was the third largest occupational group in 1960. It will become the largest occupational group in 1975 by growing 41.7 percent, adding 74,000 employees. The number of women workers in this group amounts to more than two-thirds of the total. Despite advances in the automation of record keeping, the increased volume of records and correspondence will create a steady demand for more clerical workers throughout the industry.

Thus, the concern of the secretarial and clerical students with regard to job placement is not in accordance with either the placement policies of the Area schools, or the employment outlook in their area of training. There is little doubt that those who successfully complete their training will find employment, and, regardless of whether or not this is of concern to these students at the present time, the employment outlook in the years to come is also favorable. These students should be informed regarding school policy with respect to placement, and of the prospects for employment for persons with their training and ability.

In this section, a brief summary of the responses of students to questions regarding career choice has been presented. In the final chapter of this study, "Chapter V: Conclusions and Recommendations," questions regarding vocational development and career guidance will be treated in greater detail. It is hoped that the information given by students in this survey will be useful to the staff of Area schools as they plan that program of student services which will be of greatest benefit to the students within the school and to the community served by the school.

SUMMARY QUESTIONS

Questions 53 - 57

Table 10, Appendix A, gives the number and percent of all students in the survey who marked each response to the Summary Questions. The last five questions in the survey, questions 53 to 57, were designated as "Summary Questions" and tend to summarize information obtained earlier in the survey. Appendix B presents the listing of observable differences of ten percent or more between male and female students. Appendix C presents the listing of observable differences of ten percent or more between the responses of students in the eight selected occupational programs and those of the total student population.

Three questions in the Summary Questions section were subjected to chi square analysis. They are questions 53, 54, and 57. Chi square values for these questions are presented in Appendix D. For these three questions, no observable differences will be presented in the text of this report which are not also statistically significant. However, differences of less than ten percent which are statistically significant, will sometimes be presented to aid in the interpretation of these questions.

The five questions in the Summary Questions section of the questionnaire attempted to gather together information regarding the various needs and concerns which the student may have had when he first enrolled in the school and at the time the questionnaire was administered, to identify services he had received from the school, and to inquire as to the kinds of student services which he felt should be made available.

Programming considerations made it advisable to limit to ten the number of responses for any question, and the responses "None" and "Other" accounted for two of the ten responses. For this reason, the possibility should be considered that if additional responses had been available, they might also have been marked. However, every effort was made to choose those eight responses for each question which might be expected to represent the most urgent concerns of students. In addition, the fact that the response "Other" was marked by fewer than four percent of the students in the survey on any of the questions in this section would give some assurance that the most urgent concerns of these students had been included.

Presentation of Data

Question 53 asked: "What things were of greatest concern to you when you first began attending this school? Mark all which apply." Apparently, the most urgent concern of students when they first began attending an Area school was that of trying to work and to go to school at the same time—33 percent of the students in the survey marked this response. Other concerns were "Getting a job" (31 percent) and "Making friends" (26 percent).

Each response of Question 53 was submitted to chi square analysis and 27 statistically significant differences were found. Men (33 percent) were more likely than women (26 percent) to indicate that getting a job had been a concern. Women (15 percent) were more likely than men (12 percent) to indicate concern about finding a place to live, and about transportation (33 percent vs. 19 percent). Men (37 percent) were more likely than women (23 percent) to have found it difficult to work and go to school at the same time, and women (35 percent) were more likely than men (20 percent) to be concerned about making friends. On each of these four responses, the students in the selected occupational programs responded in the direction that would be expected for their sex on all responses for which statistically significant differences were found.

For the response "Finding something to do in my spare time," there was only one statistically significant difference: 43 percent of the heavy equipment operators marked this response as compared to 16 percent for the total student population. Twenty-two percent of the men and 18 percent of the women indicated that they had been concerned about making a career choice. Two statistically significant differences were found in the selected occupational programs on this response. Twenty-seven percent of the clerical students but only eight percent of the nursing students had experienced difficulty in career choice as compared with 21 percent for the total student population.

Personal and family problems were a concern to 11 percent of the men and 19 percent of the women: 22 percent of the nurses marked this response as compared to 12 percent for the total student population. The nurses (23 percent) were more likely than the total student population (17 percent) to indicate that nothing had been a serious concern when they first began at-

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tending the school, and eight percent of the nurses, but only three percent of the total student population, marked the response "Other" for this question.

Several student comments in response to this question are presented here:

* * *

> My mother died, the hours are from 12:00-6:00, I do the cooking at home, got no brothers or sisters. But I manage.

* * *

> Meeting Girls.

* * *

> Finding time to sleep.

* * *

> My biggest concern was to know if I'm in the right trade for my ability.

* * *

> Money problems.

* * *

> Being sure I had someone to care for my children.

* * *

Question 54 asked: "What things bother you most at the present time? Mark all which apply." Forty-nine percent of the students in the survey indicated that they were bothered by money problems, and 24 percent indicated that they were unsure about career plans, a figure slightly higher than the 18 percent who stated in question 43 that their present choice of occupation was either somewhat indefinite or very indefinite. Twenty-two percent of the students in the survey indicated that family or personal problems bothered them at the present time.

Each response of this question was also subjected to chi square analysis and 22 statistically significant differences were found. Fifty-two percent of the men and 44 percent of the women indicated that they were bothered by money problems. Forty-one percent of the nurses indicated that money was a problem, as compared to 49 percent for the total student population. Eighteen percent of the men and 31 percent of the women indicated that family or personal problems were a present concern, with each of the predominantly female occupational programs producing higher percentages than those of the total student population.

Thirty-four percent of the clerical students and 32 percent of the secretarial students, but only eight percent of the nursing students, indicated that they were unsure about career plans as compared with 24 percent for the total student population. Seventeen percent of the men and 21 percent of the women indicated that they were bored with school—with 27 percent of the secretarial students, but only seven percent of the nurses, marking this response as compared with 18 percent for the total student population. Seven percent of the men and ten percent of the women indicated that they did not like the place where they were living, with 14 percent of the nursing students marking this response.

Seven percent of the men and ten percent of the women indicated that they needed help with their school work. Twelve percent each of the electronics, clerical, and nursing students marked this response, as compared with eight percent for the total student population. Thirty-five percent of the heavy equipment operators indicated that they had trouble finding something to do in their spare time as compared with 17 percent of the total student population. Thirty percent of the nurses and 32 percent of the cosmetologists indicated that nothing was bothering them at the present time, as compared with twenty-one percent for the total student population.

Question 55 asked: "What kinds of student services have you received since you've been here at this school? Mark all which apply." Although 38 percent of the students in the survey indicated that they had received no student services since being enrolled in the Area school, responses to this question also indicate that a variety of services had been rendered. Thirty-one percent had received information about careers and job opportunities, 21 percent had received help in finding a job, 14 percent had been able to talk to someone about their problems, and 13 percent had received orientation to the school.

Fifty-two percent of the machine operators, 46 percent of the secretarial students, and 41 percent of the clerical students indicated they had received information about careers and job opportunities, as compared to 31 percent for the total student population. Thirty-three percent of the nurses, but only 14 percent of the total student population, indicated that they had found someone to talk with about problems. Twenty-five percent of the heavy equipment operators as compared to 10 percent of the total student population had received help with housing. Twenty percent of the heavy equipment operators and eight percent of the total student population had received advice about financial aid. Ten percent of the men and 20 percent of the women had been given an orientation to the school, with 39 percent of the nurses, but only 13 percent of the total student population, receiving orientation.

When asked what persons at the school had given service, 42 percent of the students in the survey indicated that an instructor or department head had assisted them with problems. Twenty-eight percent had received assistance from friends or relatives, 21 percent from a counselor at the school, and 16 percent from the Director or Assistant Director.

Thirty-five percent of the heavy equipment operators indicated that a counselor had given service, as compared with 21 percent for the total student population. Fifty-three percent of the heavy equipment operators and 65 percent of the nurses indicated that an instructor or department head had given assistance or service, as compared with 42 percent for the total student population. Clerical (46 percent) and secretarial students (39 percent) were more likely than the total student population (28 percent) to indicate that friends and relatives had given service. The practical nurses (16 percent) were less likely than the total student population (28 percent) to indicate that no one had given service.

Question 57 asked: "What kinds of assistance and services do you feel should be made available for students? Mark all which apply." The response which was marked most frequently by students in the survey was "Help in finding a job" (58 percent). Other frequently marked responses were "Social and recreational activities" (47 percent), and "Help with career choice and planning" (45 percent).

Each response of Question 57 was subjected to chi square analysis and 32 statistically significant differences were found. On this question, however, a clearly discernible pattern emerges. On every response except (8) "None," a higher percentage of women than men marked the response. For those differences which are significant, the responses of students in selected occupational programs followed the pattern for their sex with only two exceptions. Nurses (45 percent) were not as likely as the total student population (58 percent) to indicate that they thought that help in finding a job was a service which the school should offer. In addition, the nursing students (25 percent) were not as likely as the total student population (34 percent) to mark response (5) "Advice about the right courses to take." One can assume that women indicate more concern than do men regarding the kinds of student services which are offered in their school and to feel that these services are important to the student.

The final question, "What kind of guidance and counseling program would be most useful for you?" was open-ended, and no coded responses were presented. Many responses were received to this question. A few are presented here:

* * *

> A person whom you could be very close to and one in which you could tell all your problems to.

* * *

> One in which they would help the student find a job after they have graduated from the school.

* * *

> I have never liked going to a counselor, so personally I wouldn't use one anyway. It would be nice, though to have someone around in case he were needed.

* * *

> Locate possible placements out of state for job opportunities.

* * *

> The program we have now is adequate.

* * *

> Because I have already decided to finish this secretarial course, the best guidance for me is one in finding a good suitable job; also information about living conditions, etc., in areas all over the country. Such a decision!!!

* * *

> Somebody to talk to who won't tell you that you're all wrong.

* * *

> None, because I tell my very close friends and they don't tell anyone neither would a counselor, but I don't dare to talk to them.

* * *

> The hospital is separate from the school, so for counseling it is necessary to make a trip to the campus.

* * *

> Personal and social problems.

* * *

Several comments by students in an Area school which did not employ a counselor are presented here:

* * *

> I never thought about it before but I think we need a counselor.

* * *

The most helpful guidance program to me would be one that helped me find the job best suited to me. I definitely think we need a counselor.

* * *

Any counselor would help, especially during the last quarter, to answer questions about employment.

* * *

Job placement.

* * *

Possibly how to keep my school work interesting to me and how to keep up with my work. I think a counselor would be worthwhile. It wouldn't be good for choosing subj. because they are already picked out for you. At one point I wanted to quit or else change programs. A counselor would have come in handy.

* * *

A guidance program that would help me decide what type of job I would be best suited for and best places to live for this job.

* * *

Career choice.

* * *

One school which does employ a counselor prepared a sheet of Directions to Students for use with the questionnaire which included these instructions: "Please complete the statement of the back page of the test booklet." As a result, many written responses to the final open-ended question were received from students in that school. Some of them are presented here:

* * *

The present system is fine. A better job placement service would be good.

* * *

They should have an interview with each student and find out if he has any problems. That way everyone is exposed to their system.

* * *

One is helping me to find a job in the kind of work I have prepared for.

* * *

The best kind of guidance and counseling program for me is like the one we have here. The counselor is willing to listen to personal problems and school problems concerning courses.

* * *

A person who you can trust to talk to about anything.

* * *

The one that we have now seems to be working out OK for most of us.

* * *

None for myself, but a complete counseling program for the benefit of others.

* * *

Guidance in selecting the right vocation.

* * *

One where we take an aptitude test and discuss what I should take and how.

* * *

The one we have is efficient.

* * *

As far as I'm concerned the Instructor is enough for me. I came to this school to learn as much as I could. And the only person who can Help me with this is my Instructors.

* * *

One that advises you in what area to go in and If this school is the right Thing for you.

* * *

One in which I could be sure about what I want to make my vocation.

* * *

The present system is all right, in fact it is quite well if you know who to get the proper information from.

* * *

The type of job a guy should have.

* * *

Help in deciding the right course, one in which I am able to handle.

* * *

Our present program is adequate.

* * *

I believe, with no question in my mind that [name of counselor] now provides the most useful and most appreciated share of guidance that I have ever seen.

* * *

> The most useful guidance would be information and location of places of employment. So when the course is finished, that one would have some idea where he could find employment.

* * *

> I don't believe I need any.

* * *

> Help to decide what courses to take, more information given to high school counselors about this course.

* * *

> One that would find you a job and give you all possible means of finding out about the job before actually working there to find out.

* * *

> NONE thank you.

* * *

Discussion

Responses to questions in the Summary Questions section tend, in some cases, to support information which had been obtained earlier in the survey, and in other cases, to introduce new information. In the Summary Question section, heavy equipment operators tend again to indicate that they had trouble in finding something to do in their spare time. About half of the students in the survey again indicated that they would like to have social and recreational activities provided for them. Students of practical nursing again appear to be less satisfied with their housing than are other students. New information which was obtained in this section include concern regarding making friends, family and personal problems, and being bored with school.

Responses to questions in the Summary Questions section also tend to support and clarify data which was obtained in the section on Financial Information. It was noted that slightly less than half of the students in the survey indicated that they had no problem getting enough money to make it through school, while in the Summary Questions section, about half of the students again indicated that money was a serious concern at the present time. Thus, the need for financial advice and assistance appears to be a genuine one on the part of some students. In the section on Financial Information, it was noted that approximately one-third of the students had a job outside of school, which required 20 hours or more of their time per week. In the Summary Questions section, one-third of the students indicated that one of their greatest concerns when they first began to attend an Area school was trying to work and go to school at the same time. The data was not processed in such a way as to be able to determine clearly the number of hours per week that these students were working who marked this response in the Summary Questions section. However, the information presented here would tend to reaffirm the need for further research with regard to the amount of outside employment which might be considered desirable for students in Area schools.

Responses to questions in the Summary Questions section regarding career choice also present information similar to that obtained in the section on Career Plans. In the Summary Questions section, almost one quarter of the students indicated that they were unsure about career plans "at the present time," while almost one-half indicated that help with career choice and planning was a service which the school should make available to students. In the Summary Questions section, nursing students, again, were less likely than other students in the survey to indicate that they were unsure about career plans. Clerical and secretarial students, on the other hand, were more likely to indicate a concern regarding career choice, a finding similar to that which had been obtained in the section on Career Plans, where clerical and secretarial students were more likely than other students to be "unsure" as to whether or not they would like to be working in the job for which they were now preparing, and also to be more likely to indicate that they thought it might be hard to find employment when their training was complete.

The response in the Summary Questions section which was marked most frequently by students in the survey was that which indicated that help in finding a job was a service which should be provided by the Area school. This response was worded in such a way that it is not possible to differentiate between those students who feel that assistance should be made available to those who want part-time employment in order to continue their studies, and those who feel that the school should provide assistance in finding full-time employment for those who have completed their training program. Although it would appear that the Area schools are not doing as effective a job as might be desired in helping find part-time employment for students, the Area schools in Minnesota take pride in placing students who successfully complete their course of study.

This question was worded in such a way that students would be encouraged to respond to any item which seemed important to them regardless of whether or not that service was provided by the school. Therefore, these results can be interpreted to indicate that, in the opinion of the students in the survey, the most important student service which the school could provide would be that of help in finding a job. With regard to placement when training is complete, this service is now being provided in an effective way.

In the section on Career Plans, it was noted that approximately 80 percent of the students in the survey indicated that they anticipated little or no trouble in lining up a job when their training was complete. However, in the Summary Questions section, the written comments of some students would tend to indicate that there are students in the Area schools who are concerned about job placement when their training is complete, and who, perhaps, are unaware that this is a service which the Area schools provide for those who successfully complete their course of study. The fact that some students appear to be unaware that such a service exists in their school would tend to indicate the importance of devising some method of informing all students of this service. Nevertheless, the fact that the Area schools do provide a service which appears to be of considerable importance to their students—that of job placement when training is complete—would tend to indicate that the Area schools in Minnesota are responsive to the needs and concerns of their students.

Chapter 4

Overview of Selected Populations

It might be helpful at this point to attempt to note a few of the outstanding differences which chacaterized the populations which were selected for consideration. In this chapter noteworthy differences between groups will be presented in summary fashion without the use of percentages or tests of significance. For more detailed information, the reader is referred to preceding sections of this paper.

Men vs. Women

The women in this survey were likely to be somewhat younger than the men and were more likely to be high school graduates. Men were more likely than the women to have been enrolled in the school for twelve months or longer. Women were less likely to be living with parents than were the men, and, if not living at home, were more likely to indicate that their housing was attractive and comfortable. The women, however, were more likely than the men to be dependent upon their parents for financial support and were less likely to indicate that they were having financial difficulties. The men were more likely than the women to have a job outside of school.

Women were more likely than men to indicate that they did some of their studying outside of school. Women were more likely than men to indicate that they had difficulty in explaining what they wanted to say and in understanding the technical language. Women were more likely to indicate that they would like to have dances, recreational sports, clubs, and a student newspaper provided by the school, while men were more likely to indicate that they would like to have competitive sports. The men tended to indicate somewhat more trouble than women with career choice and to be somewhat more likely to indicate that they might change careers in the future. Women were more likely than men to have found out about their present training program from reading about it, and more likely to be concerned about finding employment after their training was finished. Family and personal problems were more likely to be a concern to women than to men, and the women were more likely than the men to express their awareness of the need for all student services.

Machine Operators and Heavy Equipment Operators

Students in the predominantly male occupational programs tended to respond much the same as did the total student population. However, for the two programs for which a relatively small number of students were surveyed, machine operator and heavy equipment operator, a large number of observable differences were obtained; while a fairly small number of differences were statistically significant. More than half of the machine operators were 26 years old or older, and more than half of them did not graduate from high school. The home town of more than half of the heavy equipment operators was 100 miles or more from the school, and more than half of these men lived in rented rooms. More than half of the heavy equipment operators listed their savings as one source of support, while more than half of the machine operators listed the Vocational Rehabilitation as a source of support. Both machine operators and heavy equipment operators were more likely than the total student population to indicate that they needed help in finding a job.

Nearly half of the machine operators indicated that the State Employment Agency had recommended the school to them and about half of the heavy equipment operators and machine operators had talked with a counselor when they visited the school. Most of the heavy equipment operators indicated that their school had equipment not found in other schools. More than half of the heavy equipment operators indicated that none of the school work was hard and none of them indicated that he had to study outside of school. They were more likely than the total student population to rank their ability to learn as high.

Most of the machine operators thought that there was a friendly relationship among the students in the school, but about one-third of the heavy equipment operators indicated that there was never anything to do in their spare time, and more than half of them indicated that they would like to have recreational sports provided by the school. Most of the machine operators thought that their instructors knew them well. A large percentage of both the machine operators and the heavy equipment operators indicated that their close friends lived in their home town, rather than the area in which the school was located. Heavy equipment operators tended to indicate that they had very little trouble with career choice and to indicate that their present choice of occupation was very definite. More than half of the heavy equipment operators had received information about their training program from a high school counselor, while about one-third of the machine operators had received information from the vocational counselor at the Area school. About half of the heavy equipment operators indicated that their home town had opportunities for employment and most of them indicated that it would be no trouble if they had to move out of town to find a job.

In the Summary Questions section, the heavy equipment operators continued to indicate a difficulty in finding something to do in their spare time. About half of the machine operators indicated that they had received information from the Area school about career opportunities, and heavy equipment operators were more likely than the total student population to indicate that they had received help with housing and advice about financial aid. About one-half of the heavy equipment operators had received assistance from a counselor at the Area school and more than half had been helped by an instructor or department head.

Machinists and Electronics Students

The machinists and the electronics students showed fewer observable differences and fewer statistically significant differences from the total student population than did the students in any of the other occupational programs under consideration. Both the machinists and the electronics students were more likely than the total student population to have been enrolled in their school for more than twelve months, and electronics students were more likely to be attending school in their home town. Almost half of the electronics students indicated that one advantage of their school was that it had equipment other schools don't have. The electronics students were less likely than the total student population to think that their school had a good social and recreational program. The electronics students were less likely than other male students to complete their studying while at school, and more likely than the total student population to indicate difficulty with reading and writing answers to questions. Machinists were less likely than the total student population to indicate difficulty in explaining what they wanted to say. Machinists indicated less difficulty than the total student population with technical langauge, while electronics students indicated more. Electronics students were less likely than the total student population to indicate that none of the work was hard.

Electronics students were more likely than the total student population to indicate difficulty with career choice, but they were also more likely than the total student population to indicate that ten years from now they would like to be in the kind of work for which they were now preparing. They were less likely than the total student population to indicate that their home town had employment opportunities in the work for which they were training, but were somewhat more likely than the total student population to indicate that it would be no trouble for them to move out of town.

Clerical, Secretarial, and Cosmetology Students

The occupational programs which tend to enroll female students predominantly showed many observable differences and many statistically significant differences. Students in the selected occupational programs in which female students predominate tended to follow the patterns of response characteristic of all women in the survey.

Almost all of the clerical and secretarial students were high school graduates and had been enrolled in the Area school for less than a year. Clerical students were most likely to name parents as source of support, while secretarial students were more likely to have an outside job, than were other women in the survey. Secretarial students also were more likely to indicate that one thing they liked about the school was the fact that they studied only things which they needed to know; while cosmetologists were less likely to mark this response. Clerical students were more likely than other women to have difficulty with math, and cosmetologists were more likely than other women to indicate that none of the work was especially hard. Cosmetologists were more likely than other women in the survey to indicate that all of their instructors knew them well. Clerical students were more likely to indicate that their close friends were attending the school.

The clerical students had experienced more difficulty with career choice than did other women in the survey, and they were also less likely to indicate that their career choice was "very definite." Secretarial students, on the other hand, were more likely than the total student population to indicate that they did not plan on changing courses. More than half of the clerical and cosmetology students indicated that they had received information about their training program from a high school counselor, and about half of the cosmetology students indicated that friends and relatives had told them about it. Women in the survey had been more likely than men to report that a high school counselor or friends and relatives had told them about the training program, but the differences were not large enough to be reported in the preceding section.

Secretarial students were more likely than other women in the survey to indicate that they thought their chances of finishing the course were excellent. However, both clerical and secretarial students were more likely than other women in the survey to indicate that they were unsure as to whether they would like to be doing that kind of work in ten years, and both clerical and secretarial students indicated some concern about finding employment when they finished their training. The cosmetologists were more likely than the total student population to indicate that their home town had employment opportunities in the work for which they were training; while clerical and secretarial students were less likely than the total student population to indicate that employment was available in their home town. Secretarial students were more likely than other students to indicate that they were bored with school. Clerical students were more likely than the total student population to indicate that they needed help with their school work, and cosmetology students were more likely than the total student population to indicate that nothing was bothering them at the present time.

Clerical and secretarial students were more likely than the total student population to indicate that they had received information about careers and job opportunities since they had been enrolled in the school. These students were more likely than others to indicate that friends and relatives had given them assistance since they had been in school.

Practical Nursing Students

Students in the practical nursing program showed the greatest number of statistically significant differences of any of the eight selected occupational programs under consideration. In addition, they showed the largest number of observable differences of ten percent or more of any of the selected occupational programs except for the two which enrolled 40 or fewer students. The responses of the nursing students in the survey did not consistently follow the pattern of responses made by other women in the survey.

Fifteen percent of the students in practical nursing were 26 years old or older, as compared with six percent for the total student population. Seventy-seven percent were high school graduates, as compared with 83 percent for the total student population, but an additional 13 percent of the nursing students had attended college, as compared with eight percent for the total student population.

The nurses were more likely than other students to be living in housing provided by the school, and tended to be less satisfied with their housing than were other students. They were more likely than others to indicate that they thought the rules were too strict. They were more likely than other students to indicate that their savings were a source of support, and less likely to be employed while in school. They were also less likely than others to indicate that they needed help in finding a job, but tended to indicate that they were having some, but not a great deal of, trouble getting enough money to make it through school.

Nurses were more likely than other students to indicate that friends and relatives had told them about the school, and less likely than other students to have visited the school before enrolling. They were less likely than other students to indicate that they thought their school had equipment which other schools do not. They were more likely than the total student population to indicate that one advantage of their school was that it was close to home. They were more likely than other students to indicate that they always had to study after school in order to keep up with the work. They indicated some difficulty in writing answers to questions, as compared with other students, and followed the trend for female students in claiming difficulty in explaining what they wanted to say, and in understanding the technical language. They were less likely than the total student population to indicate that none of the work was especially hard.

Nurses were less likely than the total student population to indicate that they thought that there was a friendly relationship among the students in the school. They were more likely than the total student population to indicate a desire for recreational sports. They were more likely than other students to indicate that their close friends did not attend this school.

Practical nursing students were more likely than other students to indicate that they had very little trouble in choosing a career, and they were more likely than other students to indicate that their career choice was very definite. They were more likely than other students to have known quite a bit about their training program when they enrolled, and to indicate present satisfaction with it. Almost all of the nursing students indicated that they thought they would enjoy working on the job which they were preparing to enter, but they were less likely than other students to estimate their chances of finishing the course as "excellent." Nurses were more likely than other students to indicate parental approval of their career choice. They were more likely to indicate that they already knew where they would be working when their training was complete, and to indicate that their home town had employment opportunities in their field of training. They were less likely than the total student population, however, to indicate that it would cause them some trouble if they had to leave town to work.

Nurses were more likely than other students to indicate that personal and family problems had been a concern when they first enrolled in the school, but they were also more likely than others to indicate that nothing had been a serious concern. Nurses were less likely to indicate that they were bored with school than were other students in the survey, and more likely than the total student population to indicate that nothing was bothering them at the present time. Nurses were more likely than the total student population to indicate that they had found someone to talk with about their problems, and more likely to have received an orientation to the school. They were more likely than other students to indicate that an instructor or department head had given them assistance, and less likely than other students to indicate that no one at the school had given service. However, they were less likely than other women in the survey and less likely than the total student population to indicate that they thought it important for the school to provide students with help in finding a job or advice about courses.

Chapter 5

Conclusions and Recommendations

The purpose of this study was to survey some of the needs of students in the Area Vocational Technical Schools of Minnesota as these needs are perceived by the students. In the preceding chapters of this monograph, an attempt has been made to identify expressed needs of students as indicated by their responses to questions in the survey. The primary emphasis in this chapter will be to present suggestions designed to provide comprehensive student services within the Area schools. In addition, possible directions for further research which were suggested in preceding sections of this paper will be listed, and the research design developed for this survey will be evaluated.

A BRIEF REVIEW OF THE FINDINGS

The results of this study indicate that student services supplementary to the instructional program of the school are being offered to students in various ways. For example, the schools did assist some students in finding a place to live and helped others in finding part-time employment to supplement their income while in school. Students in the survey indicated that help in finding a job was perhaps the most important service which the school could perform, and job placement upon completion of the training program is offered in the Area schools. Students in the survey indicated that someone at school had given them information about careers and job opportunities, another service which meets an urgent need of students. The results of this survey indicate that high school counselors appear to be informed about the course offerings of the Area schools.

Additional efforts will continue to be needed. Some schools may deem it advisable to increase extra-curricular activities. An increase in assistance to students in finding a part-time job appears to be needed, as does continual help with career choice, and the supplying of occupational information to students. The public in general, and other educational institutions in particular, need to be continually provided with information about the offerings of the Area schools in Minnesota, and to be informed regarding desirable or required prerequisites for entrance into a training program.

THE IMPORTANCE OF WORK

The American Vocational Association (Hoyt 1968 C) in a recently prepared policy statement entitled *Vocational Aspects of Guidance,* makes several assumptions regarding the vocational needs of students. These can be summarized briefly:

1. The vocational aspects of guidance should begin in the elementary school and continue throughout the adult years.
2. Work has a potential for personal as well as financial reward; all honest work has innate dignity.
3. All students must be provided with bonafide opportunities for selecting alternatives; alternatives must be pictured as differing in kind rather than in value.
4. Students have differing kinds of educational motivations including, for some, the acquisition of job skills, and for others, the cultural and scientific emphasis; this motivation is not restricted to various levels of academic aptitude.
5. The present need for educational-vocational guidance becomes increasingly important in view of the technological nature of occupations, the need for specific skills, and the rapidity of change in the occupational structure of our economy.

Somewhat earlier, Samler (1966) had made similar comments regarding the meaning of work and its potential as a source of dignity and perhaps of fulfillment to the individual:

> One of the key ways for life to be at least tolerable, possibly satisfying, and in more than a few instances, fulfilling, is through work. . . . Work in itself has considerable potential for change in personality . . . the work role and work situation offers almost endless promise for the repair of personality as well as the fulfillment of human needs . . . the achievement of competence . . . the community shared by groups of workers . . . a means of reality testing . . . the discipline of work. . . . Work can be a road to self acceptance and, therefore, to mental health.

Hoppock (1967) makes this statement regarding the importance of one's choice of employment (p. 101):

> Many an unhappy worker has become a contented worker overnight by a fortunate change of employment; basic emotional maladjustments are not cured so quickly.

In this context, Hoppock quotes this statement from psychiatrist Karl Menninger:

> Another index of our lack of scientific thinking in regard to the function of labor is our colossal ignorance and neglect of the problem of vocational choice. Here is one of the momentous decisions that cast the lives of human beings in fixed though diverse channels. Perhaps next to the choice of a marital partner, it is the most important and far-reaching decision made by the individual.

ASPECTS OF VOCATIONAL DEVELOPMENT

The Need for Vocational Guidance

Responses of students to questions in the section on Career Plans give clear evidence of the need for assistance in the process of career choice. In that section, more than half of the students indicated some degree of difficulty in making a career choice, while nine percent of the students, although enrolled in a training program in an Area school, indicated that they were still undecided regarding their vocational plans. About 18 percent of the students indicated that their present choice of occupation was "somewhat" or "very" indefinite. Moreover, less than one quarter of the students indicated that they knew very much about the training program in which they were enrolled before they began that program.

Further evidence regarding the need for career guidance appeared in the Summary Questions section. In that section, 24 percent of the students, when asked as to what things were bothering them most at the present time, marked the response "Unsure about career plans," and 45 percent indicated that help with career choice and planning was a service which should be made available to students by the school. And although 31 percent of the students indicated that they had received information about careers and job opportunities from someone in their school, another 38 percent marked the response "None," to the question "What kinds of student services have you received since you've been here at this school?" It would appear that career guidance is being offered to some of the students in the Area schools, but that the responses of students to questions in this survey would indicate that there is need for these services to be greatly expanded.

The need for career guidance has not been overlooked by those who guide the planning of vocational-technical education in Minnesota. In a recent publication (Anderson, et al., 1968) the Vocational Division of the State Department of Education makes this statement (p. 13):

> Vocational technical programs must provide an effective counseling and guidance service in order to insure, insofar as it is humanly possible to do so, that every student will select, enroll in, pursue and successfully complete the educational program that will best meet his interests, aptitudes, capacities, and abilities.

In this publication, several goals of vocational education are stated. Goal No. 5 is quoted here because it is of significance with regard to career choice (p. 14):

> 5. Providing opportunities for individuals to pursue vocations suited to their potential capabilities while meeting the needs of trades, business, industry, and agriculture.

Although guidance and counseling services were mentioned in the Vocational Education Act of 1963, they are more clearly specified in the Vocational Education Amendments of 1968. It is included, for example, as part of the "Definitions" (pp. 6-7):

> Sec. 108 (1) The term "vocational education" means vocational or technical training or retraining . . . to prepare individuals for gainful employment . . . ; and such term includes vocational guidance and counseling (individually or through group instruction) in connection with such training.

Regarding the uses of Federal Funds, this statement is made (p. 9):

> Sec. 122. (a) Grants to States under this part may be used, in accordance with State plans approved pursuant to section 123, for the following purposes: . . . (6) vocational guidance and counseling designed to aid persons enumerated in paragraphs (1) through (4) of this subsection in the selection

> of, and preparation for, employment in all vocational areas.

This emphasis is continued in the section on State Plans (pp. 10-13):

> Sec. 123. (a) (8) provides for entering into cooperative arrangements with the system of public employment offices in . . . making available . . . occupational information regarding reasonable prospects of employment in the community and elsewhere . . . in providing vocational guidance and counseling to students and prospective students and in determining the occupations for which persons are to be trained; and . . . making available to public employment offices information regarding the occupational qualifications of persons leaving or completing vocational education courses.

The same section lists the provisions which must be met in order for a vocational program to be funded under this act (p. 13):

> Sec. 123. (a) (18) includes provisions which shall assure that funds authorized by this title will not be used for any program of vocational education (except homemaking programs under part F) which cannot be demonstrated to (A) prepare students for employment or (B) be necessary to prepare individuals for successful completion of such a program, or (C) be of significant assistance to individuals enrolled in making an informed and meaningful occupational choice.

Thus, under the 1968 Act, federal funds are to be used, not only for vocational training, but also to assist individuals in making a meaningful occupational choice, a provision of importance, not only to the Area schools, but also to educational institutions of all levels who assist with the process of career choice.

Vocational Emphasis in Elementary and Secondary Schools

The American Vocational Association (1968), Hoppock (1967), and many others have urged that vocational development should begin in the elementary years. McDaniels (1968), for example, takes issue with the work of both Super and Ginzberg, and argues that young people in the middle teens, ages 14 to 18, are not too young to make vocational choices, but rather that they are poorly prepared to make choices. He refers to the "postponement theory of vocational development" and makes this comment:

> Who needed to make choices? If you stayed in school until graduation, you were prepared primarily to go on to further education at the next level. . . . Today's youth are more highly developed physically and intellectually than any comparable group in recorded history. . . . Today, youth learn more and learn faster than any comparable group in history. It seems they could learn to make vocational choices if they were prepared to do so.

He suggests that vocational development should begin in kindergarten and continue throughout the school years, and states that efforts to help youth to choose must be long term, continual, and developmental.

The Vocational Division of the State Department of Education in Minnesota (Anderson, et al., 1968) takes a similar view (p. 46):

> Occupational education—as opposed to vocational training—should be instituted at the junior high school level. The Act of 1963 provides the flexibility for non-job training programs at the 8th, 9th, and 10th grades which bring the employment world outside the school into the classroom. Such programs could provide a means of making school more relevant to the lives of disadvantaged youth, inspire them with the ambition to continue in school and instill in them greater aspirations than they receive from their environment.

It is essential that vocations be emphasized in all school settings, at all levels of the educational scene, and in the academic as well as in the more vocationally oriented classes. At the lower elementary level, for example, children are told of the importance of work and of the services of many kinds of workers within the community. This effort should be strengthened (Tennyson and Monnens, 1963-4). At higher levels, students should be encouraged to consider the vocational opportunities which are congruent with their abilities and interests and to learn methods for making meaningful vocational decisions. The counselor, of course, is a primary agent in assisting students in assessing their life experiences, both in and out of school, as they relate to career choice and post-high school planning.

In every class, be it chemistry, math, or English, the vocational opportunities dependent upon that course knowledge should be stressed. Tennyson, Soldah, and Mueller (1965) have prepared a publication which emphasizes the teacher's role in career development and which suggests ways in which school subjects can be related to career exploration. There are many ways in which the public schools can incorporate the vocational emphasis into the educational program. The Minneapolis Public School System, for example, is investigating methods by which the vocational emphasis can be incorporated into the education of all students, and an advisory committee (Fjerstad 1968) has prepared a preliminary report which emphasizes special approaches to vocational education, vocational guidance, and the incorporation of the vocational emphasis into the school curriculum. The committee makes this statement:

> A change in emphasis from the present academically oriented curriculum to one which is based on preparing the student for life will do much to win public support.

It should be noted that under the Vocational Education Amendments of 1968, federal funds are available for the development of what are called "Exemplary Programs and Projects" for the purposes stated here (p. 17):

> Sec. 141. The Congress finds that it is necessary to reduce the continuing seriously high level of youth unemployment by developing means for giving the same kind of attention as is now given to the college preparation needs of those young persons who go on to college, to the job preparation needs of the two out of three young persons who end their education at or before completion of the secondary level, too many of whom face long and bitter months of job hunting or marginal work after leaving school. The purposes of this part, therefore, are to stimulate, through Federal financial support, new ways to create a bridge between school and earning a living for young people, who are still in school, who have left school either by graduation or by dropping out, or who are in postsecondary programs of vocational preparation, and to promote cooperation between public education and manpower agencies.

Funds under this section may be used for exemplary programs designed to familiarize elementary and secondary school students with the broad range of occupations for which special skills are required, and the prerequisites for careers in such occupations, for intensive occupational guidance and counseling during the last years of school, and for initial job placement (p. 18).

Community Vocational Guidance Services

The Area school performs a needed community service by offering vocational education to the youth of the community and to other citizens who can benefit from such training. A related community service, which is now being offered by at least one Area school, and which might well become an important function of many Area schools, is that of providing vocational guidance services to members of the community. These services are designed to assist those with special needs, such as the disadvantaged, the unemployed, the underemployed, and others who need assistance in their efforts to make wise vocational decisions.

The nature of guidance services offered to community members will, to some extent, depend upon the needs of the community in which the school is located. However, suggestions regarding the establishment of such a service might be helpful. The community guidance service should be made available to all members of the community, whether or not they intend to enroll in a program of the school which offers this service. A combination of walk-in services plus pre-scheduled appointments is quite feasible. It would be desirable to have such a service available in the evenings, as well as in the daytime, in order that persons who are presently employed but who desire assistance with vocational planning might benefit from the service. In small schools, the counselor might be available one evening a week for community vocational guidance rather than working the normal daytime schedule. In larger schools, counselors might rotate evening work in order that career guidance services might be made available for more than one evening per week. If the program of community vocational guidance were given adequate publicity, group guidance might be a useful technique.

It is essential that the proper methods be used to inform the community of this service. In addition to word-of-mouth publicity, the community could be informed of this service through the mass media such as newspaper advertising, television, and through school mail-outs. Most important, perhaps, might be spot ads on television. Money spent on television advertising regarding the services offered by the school can be considered as an important aspect of the functioning of the school, not only in assisting community members with problems of vocational choice, but also in the less tangible, but equally important function of creating goodwill within the community for all aspects of the program of the school.

Counseling Prospective Students

Hoyt (1966), in setting forth guidelines as to the responsibilities of counselors in the area of vocational-technical education, indicated that the counselor has obligations to the prospective student as well as to the student who is already enrolled in the school. Hoyt has identified the following counselor functions with respect to prospective students:

1. The counselor must seek to identify prospective vocational students within the community.

2. The counselor must assist prospective students in evaluating alternative educational opportunities which are available to him.

3. The counselor must be able to assist the prospective student regarding alternative occupational opportunities towards which various kinds of training may lead.

4. The counselor must assist the prospective student to evaluate relationships between educational and occupational information.

5. The counselor must assist prospective students in making educational-vocational decisions.

Dunnette (1966), in discussing the process of decision making in the selection and placement of personnel in industry, has noted the limitations of clinical prediction, and suggests that clinical prediction be combined with carefully designed statistical prediction based on careful validation studies and selection research. His suggestions might be useful to those attempting to establish selection criteria for training programs within the Area schools.

However, the selection of persons for employment by industry should not be confused with the kinds of counseling services which an individual needs when making a vocational decision. Normally, the individual should be informed about standards of performance and his chances of success within a given training program and on the job. However, his individual values and psychological needs must also be considered in the process of career choice. Moreover, in some cases, the individual who is deficient in certain skill areas can be helped to remedy these deficits in order that his possibility for success within a given training program can be greatly improved. For this reason, it is recommended that prospective students be counseled individually or in groups before they are accepted into an Area school.

Several advantages will result when every student is interviewed before he is accepted into an Area school. For example, possibilities for training within the school and in other institutions which he might not otherwise have considered can be suggested to the prospective student. Such an interview may also result in a greater commitment to his decision and a motivation for success which might not otherwise have occurred if no personal contact were to exist between the student and the institution before the student begins his studies. Moreover, this initial contact with the counselor will impress upon the student the fact that he does have a friend to turn to if the going gets rough. Responses of students to questions in this survey indicate that although more than half of the students visited the school before enrolling, only 20 percent had talked with the counselor when they visited the school.

A considerable amount of counselor time must be budgeted in order that all prospective students can be interviewed before they enroll, and in some cases additional staff might be needed. However, it is likely that the interviewing of prospective students will be concentrated in certain months of the year, and that even with their present staff, some schools might be able to provide this service. Regardless of how it is achieved, the potential benefits to the incoming student and to the community will more than compensate for any additional expense which might be involved. The results of this study indicate that students feel that they need assistance with problems of career choice, and the counseling of prospective students is one tangible method of assisting individuals who desire vocational training.

Admissions Counseling

Skilled admissions counseling is essential in a vocational-technical school. Doerr and Ferguson (1968) have commented on the fact that students who apply for admission to a training program are, in effect, making a career choice:

> Students selecting subjects in trade or industrial education curricula are, in essence, making vocational choices. To aid these students, counselors should have data which would indicate the degree to which aptitudes and interests of beginning students compare with individuals who have completed a given trade or industrial curricula as well

> as with persons who have successfully pursued related occupations for several years . . .

However, there are a number of considerations which will influence the decision as to whether an applicant is accepted into the program of his choice. For one thing, there are a limited number of training stations for each program in an Area school, and it is not always possible to admit the prospective student into the program of his choice. Under these circumstances, it is to the advantage of the school to select those students who are most likely to succeed in the training program and to be successful when employed in that trade. The service which the school provides to the prospective student under these circumstances is that of offering acceptable alternatives in other training programs within the school, in other Area schools, or perhaps in other educational institutions.

Moreover, the program in which an applicant has indicated an interest may not always be that which is most suitable to him. Applicants should be informed of their probability of success in the area of training for which they apply and made aware of the likelihood of their satisfaction and success upon employment. Applicants with high academic potential should be informed of opportunities which are available to them in those professions which require a college degree. Others, perhaps for financial or other reasons, might be asked to consider the possibility of entering full-time employment at their present level of skill, and perhaps of planning to increase their skills through evening school courses. Still others might be guided into a training program within the school which would appear to be more suited to their needs.

Admissions counseling in Area schools demands very specific information in order to guide students and prospective students in a wise program choice. Some assistance in this area will be provided through the work of Pucel and Nelson (1967), two staff members of the Department of Industrial Education, University of Minnesota. Their work is called Project MINI-SCORE (Minnesota Student Characteristics and Occupationally Related Education).

Under Project MINI-SCORE, information was obtained from all students who applied for admission to an Area school in Minnesota during the period from September 1, 1966 through October 1, 1968. This information included the written portions of the General Aptitude Test Battery (GATB), Form B, the Minnesota Vocational Interest Inventory (MVII), a personal information sheet, and three personality inventories. Minnesota

Scholastic Aptitude Test (MSAT) scores were obtained from the Minnesota Statewide Testing Program, since virtually all high school students in Minnesota take the test during the junior year. Records are being kept as to whether the student is accepted by the Area school, whether he completes the program, and his success as an employee.

Preliminary analysis of the data indicates that certain curricula tend to cluster together regardless of the test used. This suggests that certain jobs appeal to persons with similar personal characteristics. If additional research on this project continues to support these findings, persons could be advised in terms of clusters of jobs. Thus, the client would be able to identify a number of different jobs within the cluster in which he might consider interning and in which he would have reasonable expectations of succeeding.

Tyler (1964) is one of the many who have pointed to the limitations with regards to the use of any test or test battery; these limitations must be considered when evaluating information generated by a project such as MINI-SCORE. With regards to those tests which attempt to measure cognitive abilities, often referred to as "intelligence" tests, Tyler makes this statement:

> The general mental ability tapped by the most commonly used tests could best be defined as *aptitude for education* . . . They do not predict how rapidly or easily a person will pick up *any* new skill. It is only in "book learning" and the mastery of abstract concepts that the high-scoring person has a clear advantage. Others who score much lower than he may be just as successful in learning to play the trombone, drive a car or tend a machine.

Kapes (1969) reports the initial investigation of a longitudinal research effort designed to study various factors related to career development. The study which he reports evaluated the utility of the GATB as a predictor of shop achievement with vocational-technical bound ninth grade boys. Kapes makes this statement:

> The GATB manipulative aptitudes (K, F, and M) made a significant contribution to the validity of the GATB for predicting shop achievement. . . . From the findings of this study, it can be hypothesized that the GATB is superior to other aptitude measures in predicting shop achievement because it contains manipulative as well as cognitive aptitudes.

For Project MINI-SCORE, however, Pucel and Nelson used only the written portions of the GATB. Thus, although Clerical Perception (Q) and Motor Coordination (K) are included in the data which was collected, Finger Dexterity (F) and Manual Dexterity (M) are not included. It is possible that the omission of these tests of dexterity may tend to limit the usefulness of the scores obtained through this research for those training programs which demand these kinds of dexterities.

Moreover, tests such as the GATB tend to discriminate against the disadvantaged. Gordon (1963), for example, makes this statement:

> The basic work on the more popular tests has been with middle-class and upper-class Caucasian U.S. Nationals. Despite the tenet that a test must be used only on those for whom it has been standardized, we have come to use these tests and to apply their results as if they were valid for *any* population.

Mathis (1969) discusses in some detail the paradox that the GATB, used by the U.S. Employment Agency to determine the suitability of a candidate for any given job, is looked upon as an aptitude test, when, in fact, it is actually an achievement test. He suggests that when a deficit is found in the abilities of a candidate, that he be informed of this deficit and be permitted to remedy it through night school classes or home practice. He also notes the unfounded assumption underlying the concurrent validation of the test. As presently used, the GATB, according to Mathis, unfairly discriminates against the disadvantaged applicant.

Clements, et. al. (1969) focus on factors regarding counselor and client attitudes towards evaluation and discuss test weaknesses such as low reliability and/or validity and inadequate norms. They suggest that these factors may result in the invalidation or distortion of both objective and subjective evaluations of students from the lower socioeconomic strata of the population.

Additional efforts are needed; tests must be developed which will identify the strengths and special abilities of the disadvantaged. Because of the current emphasis on vocational training for the disadvantaged, it is to be hoped that test makers will undertake the construction of testing instruments for counselor use with disadvantaged students.

Moreover, further study is needed regarding the relationship between the training which a student receives in a vocational school and the requirements of the job which he will enter. It is possible, for example, that certain of the skills and abilities which are needed for success in any given training program may bear a limited relationship to job success. If this is so, the requirements of the training program might tend to discriminate against individuals who otherwise might prove to be most satisfactory workers in the industry.

Personality tests are also vulnerable to many types of criticism, and Tyler (1964) notes briefly the problems involved in any attempt to assess personality. She reports that the scoring of answers to a biographical data blank has proved more useful than other personality measures in several occupational settings:

> What a person has *done* is one of our best clues as to what he *is* and, therefore, to what he is likely to do in the future in situations involving similar psychological requirements.

Pucel and Nelson do include a personal information sheet in the data which they have collected, and it is possible that this information will provide useful clues for counseling students and prospective students. However, since nearly 70 percent of the students in this survey were less than 20 years old, biographical information can be expected to be somewhat less useful with this population than it might be with a more mature population.

A high degree of test sophistication is required in order to interpret test results in any meaningful way. Counselors who have been trained in Minnesota have taken graduate course work in tests and measurements, and are well aware of the limitations of test results mentioned above. Thus, while they will welcome all information which can be used to assist the student or prospective student in making a realistic vocational choice, they should not follow such criteria blindly, but should, instead, attempt to put such information into perspective for their client.

Those schools which wish to select and train the students who are most likely to succeed in any given area of employment would do well to consider the possibility of continuing a study such as MINI-SCORE as an ongoing part of the service which the school renders to the student, the community, and the local employer.

However, it should be understood that the kind of data generated by a project such as MINI-SCORE, while containing measures of interests, aptitudes, personality, and biographical data, is not expected, in itself, to give sufficient information for a meaningful career choice. Other factors are also important.

The values and attitudes of the individual, his degree of motivation, and aspects of his own personal situation must be considered. Guidance counselors with training and experience are essential in any admissions program, not only to assess the data which is made available through testing procedures, but also to assist the student or prospective student in a realistic evaluation of other factors which will affect career choice.

Orientation

Another consideration suggested by the data presented in this paper is that one important service which the school can and should perform for its students is that of an orientation to the school for all incoming students. Many of the needs which have been identified in this survey would be served through the initiation of a carefully designed orientation program.

Handbooks: Some of the Area schools have excellent student handbooks which present much of the information which an incoming student needs to know. However, there is no reason to believe that all students study these handbooks as carefully as might be desired, and the results of this survey tend to indicate that some students are unaware of the services which are available through their schools.

Getting Acquainted with Staff and School: The orientation program would be an opportunity for all incoming students to meet the counselors and other staff members of the school and to learn the duties of each and the services which each performs. Information about school services could be presented; in particular, students should be informed regarding job placement services which are available for those who successfully complete their training program. Information could be given regarding social and recreational activities which are available in the school and the community. School policies regarding absenteeism and tardiness could be discussed, as well as such things as grading policies and academic probation, dress code, if such exists, and other standards of acceptable behavior.

Financial Aid and Part-Time Work: Assistance with financial concerns could be a part of the orientation program. Those who need help in finding a part-time job could be identified and guided towards appropriate part-time employment. Students could be cautioned as to the amount of part-time work that a student could reasonably attempt while continuing to maintain a satisfactory level of attainment in the training program in which he was enrolled. Some students might benefit from help in planning their personal budget.

Providing Guidance to New Students: Some aspects of career guidance would be included in an orientation program. Interest and achievement tests could be administered as part of the admissions process, and the interpretation of these tests could be conducted in a small group setting with individual counseling available to those who requested it. In addition, test scores could be used to identify those students who need certain remedial classes in order for them to obtain their career objectives. Students could be provided with career and occupational materials and encouraged to seek more detailed information in their areas of interest. Work roles, the decision-making process, and aspects of career development would constitute a significant part of the career guidance offered by the Area school.

Career Exploration Within the Training Programs of the School

Another method of assisting the student in the process of career choice is that of encouraging exploration within the training programs offered in the Area school. Procedures could perhaps be developed by which those students who wished to do so could systematically sample two or more training programs within the school before making the decision as to which program to complete.

In the section on Career Plans it was noted that only six percent of the students in the survey had changed courses since being enrolled in any Area school. This figure would tend to indicate that Area schools do not generally encourage career exploration through any kind of systematic sampling of courses within the school, and that at the present time, the training which a student receives will in all probability be that of the course in which he began. This figure could also be interpreted to indicate that when a student finds that his course of training is unsatisfactory to him, he is more likely to withdraw from the school than to change to a more appropriate course.

In addition, 14 percent of the students indicated that their school does not permit course change. Random movement from one training program to another would of course result in chaos. However, Area schools can devise methods for achieving flexibility within their programs. For example, if new students were admitted, and students already enrolled were permitted to change programs at the beginning of every quarter or semester, student and community needs might be served with a minimum of confusion. In fact, this system has already proved workable in at least one of the Area schools. The data presented in this study indicates that many students are undecided regarding career choice, and those provisions which will assist the student in making a wise vocational decision while still enrolled in the Area school will benefit not only the student, but also the community.

Career Exploration Through Work Experience

It was mentioned in the section on Financial Information that one advantage of part-time work was that it provides that kind of first-hand information which is most valuable in the process of career choice. Harris (1961) has presented a theory of the importance of work experience which stresses the significance of responsibility, of work activities, of wages, and of attitudes towards oneself and work. However, there has been very little empirical research on the influence of either volunteer work or paid employment upon career choice (Bloom 1969), and such research is needed.

One recent attempt to research the effects of employment upon vocational choice is reported by Bloom (1969). The subjects, high school students from lower socio-economic backgrounds, spent eight weeks during the summer of 1967 in a full-time hospital work experience. The control group were students from the same socio-economic background, but without the hospital experience. Both groups were contacted in March 1968, and it was found that the experimental subjects were more likely to indicate that they would like to enter a medical occupation than were the control subjects.

Counselors in the Area schools should not overlook the advantage of employment outside of the school situation as one form of career exploration. The student who is unsure about his vocational decision may perhaps gain greater insight into the demands of a particular occupation when he is employed in that trade or industry on a part-time basis, and he may well decide, either that the choice was a good one for him, or else that he would prefer another kind of work. The assistance of industry can be solicited for a project such as this in order that the individual student may select the trade most appropriate for him, and that industry may obtain qualified workers. Certain of the vocational programs in the Area schools now have such a cooperative relationship with industry; however, greater efforts are needed in order to increase such cooperation for the benefit of both the student and the employer.

Concerns About Career Choice — Men vs. Women

The responses of students in this survey indicated that men were more likely than women to experience difficulty in making a career choice. Two articles in the *Personnel and Guidance Journal* present findings similar to those reported in this survey. Osipow and Alderfer (1968), using 10th, 11th, and 12th grade students as subjects, found that girls scored higher than the boys on the Vocational Maturity scale of the Vocational Development Inventory both before and after the experiment. Munday, et al. (1968), using male college students, found no evidence to indicate maladjustment for students with an unpatterned interest profile. Related research was reviewed and this study was found to be confirmed by several others. The conclusion of the authors is that some men pattern later than others, and that this characteristic is not related to maladjustment, age, or intelligence.

Engelhard (1968) has suggested that, although men have no initial choice as to whether or not they will work, they do perceive themselves as having a much broader range of vocational choices than those which are generally considered appropriate for women. This makes career choice more difficult for men. Women, on the other hand, have a much narrower choice of careers, and are more likely to accommodate themselves to their living circumstances, the needs of their children, hours which fit family schedules, and such things. Since the alternatives which women perceive as appropriate for them are fewer than it is for men, the choice is less difficult for women than it is for men, according to this hypothesis.

On the other hand, there are those who maintain that many young women in our society fail to give sufficient consideration to problems of career choice and who appear to be unaware of the number of years that they are likely to be employed in the work force. Byrn (1969), for example, makes this statement:

> About eight out of ten girls today will be gainfully employed at some time during their lives . . . Even though women are marrying younger, they should think about preparing themselves for careers in addition to marriage . . . The average girl in high school today will spend 25 years in paid work outside the home. This calls for serious planning and preparation.

Hunt (1962), Berry (1966), and Winter (1967) are amongst the many who have addressed themselves to this problem.

Additional examination of the responses of students in this survey indicated that both clerical and electronics students had expressed more difficulty with career choice than did other students in the survey. Thus, we cannot assume, either that men need more help with career choice than do women, or that the problems which women face when deciding upon a career are more difficult than those which men encounter. It might be more accurate to assume that many, if not most, students will need assistance in formulating their career plans. Ideally, this assistance will begin in the elementary years and continue throughout life. There will undoubtedly always be community members, prospective students, and students in the Area schools who will need skilled guidance in the formulation of their career plans.

The Role of the Instructor in the Guidance of Students

Hoyt (1966) has suggested that teachers of vocational education students must participate in the guidance program if the needs of students are to be served. He identified three functions of the counselor in this regard:

1. The counselor should assist teachers of vocational education in learning more about the students they teach.

2. The counselor should assist teachers of vocational education in incorporating pertinent occupational information in their course content.

3. The counselor should assist teachers of vocational education in their attempt to provide guidance and counseling to students.

The Student Departs

Dropouts: Students may terminate their studies before completion of the training program for any number of reasons. Some may drop out for personal reasons, including military obligations, while others may have found that they can obtain the employment they desire without additional training. Such attrition should not necessarily be considered as a sign of failure on the part of the school or the student; in many cases, attrition can be viewed as a form of continuing career exploration on the part of the departing student.

However, every effort should be made to arrange a final interview between the counselor and the student before the termination is considered final. At this time, the counselor may be able to assist the student with some aspects of his career planning, and perhaps to offer valuable insights regarding the student's present and future situation. In most cases, the counselor will invite the student to continue his studies at some later time, and he will remind the student of community guidance services and training opportunities which are available.

The counselor can gain valuable information for himself and for the school through the final interview. It is at this time that the counselor will make an evaluation as to the effectiveness of the guidance program and other student services within the school. If a dropout study is in process at the time of the interview, the counselor can obtain specific kinds of data related to the design of the study. For example, a study designed to evaluate admissions criteria would include data on those who withdrew as well as those who completed their training. A dropout study might also solicit information regarding various kinds of unmet student needs which may have contributed to student attrition, and might include questions designed to determine the need for greater flexibility in movement of students from one training program to another, or greater sensitivity within specific programs to the needs of individual students.

The Student who Completes: Students who complete their training program should be interviewed by the counselor either individually or in small groups. At this time, the student can be reminded of continuing community guidance services, and information can be obtained regarding the effectiveness of the guidance program within the school and of other aspects of the operation of the school.

Placement Counseling: Most students will learn of job opportunities within their trade from the instructor, the coordinator, or through their own efforts in seeking employment. Some students, however, may be undecided about several options which are open to them and may need some assistance in the decision making process regarding their choice of employment. When needed, the counselor may sometimes assist the student in evaluating the opportunities which are available to him and in improving his decision making skills.

Occupational Information

Publications: Vocational counseling does not take place in a vacuum; vocational decisions must be founded on an adequate information base, and the information must be conveyed from the counselor to the client by some method or another. One method of informing the client about various occupational opportunities is through the use of printed materials.

Pamphlets, books, and other occupational materials must be organized in some systematic fashion in order to be available for use by counselor and client, and a number of plans are available for use in filing and retrieving occupational information. The Minnesota Filing Plan (Minn. Dept. Educ. 1968), for example, uses an alphabetical system. The headings are those which are likely to be referred to by a student gathering occupational information, and numerous sub-headings and cross references are provided. The plan is designed for student use with little supervision from librarian, teacher, or counselor. Hoppock (1967) reviews a number of systems for classifying and filing occupational information, and suggests the "homemade" plan for the counselor who prefers to devise his own workable system.

Tennyson et. al. (1965) have summarized National Vocational Guidance Association (NVGA) standards for publications of occupational literature, and have presented guidelines for evaluating the usefulness of various occupational materials. The *Vocational Guidance Quarterly* lists current recommended occupational literature in each issue of this publication. The material selected was chosen on the basis of the NVGA Guidelines (1964).

Hoppock (1967) suggests that the counselor should order new materials on approval only, and should reserve sufficient time to appraise each accession before it goes onto the shelves or into the files. Regardless of the method used for arranging occupational materials, a considerable amount of counselor time will be involved in making those decisions regarding the materials to be included and the methods used to arrange them. However, counselor aides, library aides, or clerical workers can be used for the more tedious tasks of arranging the files and keeping them in order.

Computer Services: An Area school which desires to serve its student body effectively needs access to computer services for the storage and retrieval of information which is necessary to the successful functioning of the school. For example, occupational information, including both local and national trends is best handled by computers, since the quantity of knowledge that is needed to give effective vocational guidance is considerably larger than can be handled comfortably by any single individual.

Computers can be programmed to assist with a variety of student services, including certain aspects of counseling. Cogswell et. al. (1966), for example, report on the use of a computer in the counseling session with ninth grade students in Palo Alto California. The computer was programmed to respond in much the same way as a "good" counselor would. The student conversed with the computer by typing "Yes" and "No" answers, and by typing a number when a choice of responses was possible. The student or the counselor could request a personal counseling session when either felt that a computer counseling session was not appropriate for the needs of the student.

Loughbary et. al. (1966) report on a computer-based automated counseling simulation system which was designed to determine the similarity of outcomes between the computer system, a model counselor, and a second counselor. The machine system agreed with both human counselors on approximately 75 percent of the appraisal statements and about 65 percent of the course selections. The automatic counseling system predicted a significantly higher GPA for pupils than did the human counselor and predicted more students as potential dropouts. It also encouraged more students to explore widely in academic areas than did the human counselor. A significantly greater number of pupils indicated having problems with courses to the computer than they did to the human counselor.

The following student reactions were reported: nearly all students had a favorable attitude toward both counseling modes, but were more positive toward the human than the automated counseling system; the pupils felt that the human counselor had a greater *amount* of information than the automated system, but that the machine had more *specific* and *factual* information than the human counselor; pupils felt that the human counselor would know more about their interests and personalities than the automated system.

Pennsylvania State University also has a program of Computer Assisted Occupational Guidance. The computer acts as a storage and retrieval system for occupational information and eliminates much of the routine work which a conscientious counselor must do to secure pertinent up-to-date information and data for his clients regarding occupations, employment possibilities and salary projections. The system presents occupational information based on each student's particular capabilities and interests and each student determines the type and amount of occupational information he will receive.

A typewriter is used to provide a record of occupational information which the student may take with him. It also provides the means for student-computer communication. A tape recorder is used to present actual workers' comments and feelings in regards to specific occupations, and a slide projector is used to graphically present and illustrate typical tasks performed in a specific occupation. Although this particular system was designed for use with high school students, it would seem that some sort of adaptation of this system might be valuable in every community, for the use of youth and adults alike.

Computers are also needed to collect, store, update, and retrieve information such as expectancy tables and selection criteria regarding specific training programs within the Area school. They are needed to store and analyze information regarding student characteristics within a given school or a given program. They are needed for the many research projects which a school might desire to undertake such as a survey of student needs, concerns, or opinions, follow-up studies, and the effectiveness of experimental programs within the school.

Career Resource Center: Another method of providing students, prospective students, and community members with occupational information is through a Career Resource Center. The Center would include resources such as printed occupational materials, tape recordings, and slide projectors; a computer programmed with occupational information might also be included. Individual study booths could be made available. Available materials might include, not only literature pertaining to occupations, but also catalogues from various vocational schools, colleges, and universities. It might include information which, while not directly related to the choice of occupation, would still affect the progress of the career of the individual. Thus, sections on budgeting, health, and even the use of narcotics might be included. To be of greatest service, the Center should be open to community members during evening hours. A well-publicized Career Resource Center could be an asset to any community, and would provide a useful service to students of the Area school and to citizens of the community in which the school was located.

Summary of Vocational Guidance Services

Hoyt (1966) summarized the role which the counselor plays in the vocational guidance of students, and noted three counselor functions which must be performed:

1. The counselor should help each vocational education student see himself as a worthy and worthwhile member of society.

2. The counselor should help each student in the process of educational-vocational development.

3. The counselor should help each student plan and implement actions to be taken following vocational education training.

Vocational choice is one of the most important decisions which an individual makes in his lifetime. Several suggestions have been made as to ways in which the educational system in general, and the Area schools in particular, can assist students in making this important decision. These suggestions include the beginnings of career exploration in the elementary years with more intensive vocational guidance during the high school years, vocational counseling services within the Area schools for all members of the community, expert admissions counseling for all prospective students, and the opportunity for vocational exploration after admission to an Area school. It is to be hoped that these types of services will continue to be offered by the schools of Minnesota as they seek to fulfill their function of service to the student and the community.

OTHER COUNSELOR SERVICES

In the preceding section of this chapter, various aspects of vocational guidance within the Area school were considered in some detail. In this section, other kinds of counselor services will be discussed. It is somewhat difficult to draw a sharp line between those services which relate to vocational choice and preparation and those which do not, since any aspect of a person's behavior or life situation which affects his learning ability or his job performance can be said to be a vocational concern. And individuals differ. An undesirable life situation which might adversely affect the job performance of one individual, for example, might in no way affect the job performance of another, or might spur a third individual to even greater achievement. For these reasons, the distinction between those services which are vocational in nature and those which are not, is difficult to make.

Life Skills

There seems to be considerable agreement, however, that vocational education is more than simple training in job skills. Tennyson, Soldahl and Mueller (1965), for example make this statement: "A vocational developmental task of first importance is that of becoming a first-rate human being." The *General Bulletin* of one of the Area schools (Mpls. 1968) makes the following statement regarding the objectives of vocational-technical education:

> Vocational-technical education gives definite purpose and meaning by offering training related to specific occupational goals. Technical education is

> more inclusive and broader in scope than a program which trains only for job skills. This type of education develops abilities, understandings, attitudes, work habits, and appreciations which contribute to a satisfying, productive life.
>
> The primary objective of occupational-technical education is to prepare individuals for gainful employment.

Industry is also aware of the importance of human and social values within the organization, and there is now a large body of research regarding employee attitudes, morale, motivation, and job satisfaction. Tiffin and McCormick (1965) in their book *Industrial Psychology,* devote five chapters to the general subject of "The Organizational and Social Context of Human Work." They cite a number of rather diverse studies which tend to indicate that satisfaction with one's work or work situation apparently does *not necessarily* provide strong motivation to high levels of job performance; there is, however, somewhat more consistency in the relationship of attitudes to such aspects of behavior as absenteeism, tardiness, and tenure or employment stability, and there are various types of "hidden" costs in having dissatisfied employees.

Wiegman (1969) has pointed towards possible developments in the work life of individuals in the years to come, and to the need for workers to learn to adapt and adjust to changing conditions:

> Working hours are almost certain to shrink to a twenty-five or thirty hour week. What will they do the rest of their waking hours? For those who plan to take a second job, there is a distinct possibility that in the years ahead moonlighting will be as socially unacceptable as bigamy. There is also the possibility that the retirement age will be lowered, thus shortening the span of working years. Tomorrow's employment world will be full of changes which will confront the employee. The key is adaptability. If the employee can learn to adapt and adjust, change need not be catastrophic —merely something that a person who is conditioned to it, takes in stride.

Wiegman's comments underscore two needs of the vocational student: the need to learn to use leisure productively, and the need for flexibility and adaptability. The Area school can assist students in meeting both needs in order to function effectively as workers and as community members.

Values

There is the danger, however, that the counselor in attempting to aid the student in achieving a satisfying and productive life, will at the same time be attempting to impose his own value system upon the student. Psychologists tend to have a somewhat narrow view of that which constitutes the good life and to define adequate personal adjustment in terms of that adjustment which they themselves have made. Introspection, extroversion, insight, and self-awareness are highly prized commodities in psychological circles. And yet these may not be the qualities which the student desires for himself, nor are they necessarily the attributes that will guarantee success in his chosen career. For this reason, the counselor in any setting must continually differentiate between those values which are important to him, and the somewhat different values or life style which the client may present. Within the Area school, then, the counselor will work to assist the student in developing those attitudes and behaviors which will contribute to a satisfying and productive life, in terms of the value system of the student.

Family and Community Living

The counselor will attempt to foster activities within the school designed to prepare the student for adult living. Three major aspects of adult life might be included: preparation for family living, preparation for leisure, and preparation for community membership. The counselor might suggest, for example, that courses in these three areas be made available to students on an optional basis; the counselor himself might teach one course which was primarily psychological in emphasis. The content of such a course might relate to courtship and marriage, to the psychology of personal adjustment, to study skills, or to some other subject area in which the counselor was competent.

The counselor might encourage leisure activities within the school such as clubs or interest groups, group attendance at movies, plays, or athletic events, and he might suggest that instructors discuss their leisure time interests with students. The counselor could determine the need for school sponsored social and athletic events. He might organize a Student Senate, if none existed, and would perhaps act as its sponsor. He would encourage student convocations, designed to expose students to a wide variety of experiences including many topics of general interest and various types of talent. He might call attention to the need for a student lounge or meeting place, if none existed, and would work continually to improve it as a means of encouraging interaction between students in the various training programs (Jones 1969).

Help With Personal Problems

The counselor would also provide crisis counseling and personal problems counseling for those students who requested this service, and would make referrals to other individuals or agencies when appropriate. Assistance with personal problems seems to have relatively low priority with students in Area schools. In response to the last question in the survey: "What kinds of assistance and services do you feel should be made available for students," only 26 percent marked the response "Somebody to talk to about personal problems," the lowest percentage for any of the eight alternatives offered. However, the written comments of students to several of the questions in the questionnaire would indicate the need for a counselor to assist individual students with personal and family concerns.

Perhaps students tend to resist the idea of discussing their personal problems with a counselor because of the negative aspects of admitting to personal problems or weaknesses. Tyler (1960) has spoken to this point in an article which she calls "Minimum Change Therapy:"

> By and large, our diagnostic thinking rests on concepts taken over from psychopathology. We try to ascertain where a person's weak spots are. Many psychologists, especially in recent years, have criticized this approach and advocated the diagnosis of strengths. In minimum-change therapy we pay no attention to personality weaknesses that are adequately controlled or neutralized. We all have areas like this. It is only the difficulties that are actually blocking the person's forward movement that we must attempt to deal with. And . . . it is quite possible that these may be by-passed rather than attacked. A person who knows his real strengths and is clear about his basic values may be able to turn away from anxieties about aspects of his life that would be difficult to change.

Strengthening Individual Potential

Kendall College, a junior college in Evanston, Illinois, has been quite successful with a series of Human Potential Seminars designed to expose students to the idea that there might be something right with them, rather than just something wrong with them. During freshman orientation, all students were given four hours in small group sessions designed to achieve the goals of self-determination, self-motivation and an increase in self-worth and self-confidence. It was hoped that as a result of this experience, many students would want to continue for the entire 16 week non-credit Human Potential Seminar course.

During their experience in the Human Potential Seminars, the students passed through seven phases: the personal unfoldment experience, achievement acknowledgement, goal establishment geared to the present rather than to the future, strength bombardment, identification of personal values and their relationship to personal conflict, potential bombardment, and long range goal establishment. One year after the seminars were completed, a questionnaire sent to participants indicated that the seminars had been quite successful. For example, 77 percent answered that they presently thought more highly of themselves than they did prior to the seminars, and 94 percent indicated that they were presently aware of and able to solve personal conflicts.

Perhaps an experience such as this would also be beneficial to vocational students. Area school counselors are encouraged to experiment with student group activities such as the Human Potential Seminars and to make careful evaluation of the results of such activities in terms of the goals of the individual student and of the broader goals of vocational education. Moreover, they are encouraged to report the results of such experiences to counselors in other Area schools in order that all schools may benefit from experiments designed to determine effective methods for meeting the needs of students.

RELATED SERVICES

The Public Relations Function

> Do businessmen telephone to ask if they can hire your cooperative office education students? Do parents call to ask that their child be placed in your cooperative office education program? Does the guidance counselor tell you over a cup of coffee that the students are anxiously waiting to take

> co-op? Does the principal stop you in the hall to comment on the "good article about your co-op program" in last night's paper?
>
> If none of these things are happening, you should take another look at your public relations program.

In this manner, Grovom (1969) begins her article entitled "How to Publicize a Good Product." The article presents a number of methods that can be used by the coordinator to publicize a particular program within a school, and could be generalized to include promotion and publicity for many Area school programs. The suggestions are useful, practical, and workable. Each suggestion is one that would be cost-free to the school except for the cost involved in the use of the coordinator's time.

However, consideration should be given to the possibility of paying for publicity for Area schools, in addition to that publicity which may be donated by news media or which can be achieved by other methods. Successful business companies spend great sums of money on promotional campaigns and on creating a good public image, but educational institutions have tended to take the attitude that their good works will somehow become known to the public with no financial expense on the part of the institution. It is possible that money which is spent by the Area school to publicize its services to the community, will more than be returned in terms of community support for the programs of that school.

The Vocational Education Amendments of 1968 make specific provision for providing information to communications media (p. 32):

> . . such dissemination activity shall include the development and issuance of materials which inform teachers, students, the disadvantaged, and dropouts of new and expanding opportunities for education . . .

Teachers and students can be informed through newspaper articles and advertising. However, to reach dropouts and the disadvantaged, the Area school should consider the possibility of using spot advertising on television and radio, as these are the media that are perhaps the strongest influences in the lives of the disadvantaged. McLuhan and Fiore (1967) have noted the profund effects which electric circuitry has had upon our culture and the totally new environment which surrounds the youth of today:

> It was the funeral of President Kennedy that most strongly proved the power of television to invest

> an occasion with the character of corporate participation. It involves an entire population in a ritual process . . .
>
> In television, images are projected at you. You are the screen. The images wrap around you. You are the vanishing point. This creates a sort of inwardness, a sort of reverse perspective which has much in common with Oriental art.

It is likely that much of the impact that television has had upon the disadvantaged in the past has been to display the affluence which appears to be enjoyed by others but to which he cannot aspire. What television has not said to the disadvantaged is that in order to share in this affluence, he must obtain marketable skills and acceptable work habits (see Liebou 1967, pp. 29-71). The Area schools can offer these skills to the disadvantaged, but to do so, it must first "sell" its product to him, and this perhaps is best done via the media that may be largely responsible for causing his disenchantment — through television. It need hardly be mentioned that television advertising on educational channels, and radio advertising on an FM station that plays only classical music is not likely to reach the disadvantaged. The school must go to him "where he lives;" it must use those stations to which he listens regularly, those which are a part of his daily life. Television can inform the disadvantaged of training opportunities which are available to him through the local Area school. It can, at the same time, inform the community of the wide range of services which are being offered by the school to the citizens of the community.

The Area schools of Minnesota have a responsibility to make their programs known to the community at large, to teachers, counselors and administrators in the educational institutions in the state, and to those who work with state employment services and other agencies who serve both young people and adults who might seek training or retraining for employment. Junior college counselors, for example, are likely to have contact with students who, for one reason or another, may choose to discontinue their academic studies, but who might welcome the opportunity for vocational training which would lead to employment.

Anderson, et al. (1968) makes this recommendation (p. 55):

> A communications system should be developed among the various educational institutions so that students will have information about opportunities in all post-secondary institutions. For example,

> high academic ability students who apply for enrollment in area vocational technical schools should be informed of their capabilities and the opportunities available in baccalaureate programs. Also, students who might discontinue their college education should be counseled as to the opportunities in vocational programs before they leave college.

In order to facilitate communication between the various educational institutions, the Pupil Personnel Services Section of the Minnesota Department of Education has prepared a *Directory of Courses Offered in Area Vocational Technical Schools* (Fuller, Kerlan and Miller 1969). This is to be revised on an annual basis. Information will be available as to the offerings of each of the Area schools, as well as a listing of the prerequisites and general abilities which are needed for each training program. High school counselors can use the directory to assist students who desire post high vocational training to plan their high school curriculum in such a way as to prepare adequately for the training program of their choice. Counselors in other settings will be able to inform their clients of the program offerings of each Area school in the state.

It will be remembered that in the section on Career Plans, students were asked where they had received information about the training program in which they were enrolled. The response marked most frequently was "From my high school counselor," with 42 percent of the students in the survey making this response. Other sources of information about the Area schools, as indicated by the responses of students in the survey were "From reading about it," 38 percent, and "From friends and relatives," 33 percent. These figures would tend to indicate that high school counselors are aware of the offerings of the Area schools, and are informing students of training opportunities open to them, and that the general public is also informed of the training programs available in the Area schools.

However, when asked how much they knew about their present training program before they began it, less than one quarter of the students indicated that they knew quite a bit about it before they signed up. This response would tend to indicate that potential students, together with counselors, family, friends, and the general public should continue to be supplied with information about the programs of the Area schools. This information-giving public relations aspect of the operation of an Area school will always be in process, will never be complete. However, the importance of keeping the public informed of the programs of the Area school and of the services which the school offers to the community cannot be overestimated, and will always be an integral part of the operation of any Area school.

Communication Between Vocational Educators

There is a need for better communication between the Area schools regarding the student services which are being offered by individual schools. It is quite possible, for example, that certain of the suggestions which have been made in this monograph are already a part of the student personnel program in certain of the schools. Schools need to know what has been attempted in other Area schools, and need to be informed of those programs which have been successful and those which have failed to fulfill the purpose for which they were intended. In this way, every Area school in the state will be better able to improve its service to students by creating innovations based upon the needs of their own school while benefiting from the experience of other schools.

However, too great a reliance upon communications within the State can lead to a sort of provincialism, and counselors, coordinators, and admistrators are urged to be informed regarding those developments in vocational education which are taking place outside of the State of Minnesota. One way of keeping informed of these developments is, of course, through the *American Vocational Journal.* Another useful source of information is the publication, the *Occupational Education Bulletin,** which gives a thorough but concise listing of new occupational programs being developed in vocational-technical schools and junior colleges throughout the country, including those located in Minnesota. It also lists many sources of information that would be of great benefit to schools planning to establish new programs in vocational education, and those desiring the finest in the programs they now offer.

Another source of information is the *Junior College Journal.* Although some articles in this journal would be of relatively little interest to staff of the Area schools of Minnesota, it should be noted that community junior colleges throughout the country are tending more and more to stress vocational education, and Area school personnel should be aware of this trend. Moreover,

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*In order to receive the *Occupational Education Bulletin,* it is necessary to be a subscriber to the *Junior College Journal,* at the cost of $4.00 per year. To order a subscription to these publications and to obtain additional information regarding them, write to this address:
American Association of Junior Colleges
1315 Sixteenth Street N.W.
Washington D. C. 20036.

some articles in the *Junior College Journal* will be clearly relevant to Area school personnel. Articles which have appeared in recent issues, for example, include such titles as these: "Audiovisual-Tutorial Instruction in Business," "Fine Arts in a Factory," "Students Are a Lot Like People," "We Can Serve Welfare Recipients," "Three New Twists in Occupational Education," "Encouraging Innovation in Teaching," "Are Our Colleges Really Accessible to the Poor?" "Teaching and Guidance Go Together," "Open Door—Color TV," "Say Something in English," "Aviation at Metropolitan Junior College," and "You Can Afford TV."

Student Records

No questions were included in this survey regarding the perceptions of students as to the function of the Area school in keeping student records as a service to its students. However, the keeping of student records is a necessary student service performed by every Area school. Bottoms (1966) surveyed administrators, faculty members, and students in his study designed to determine student personnel needs within the Area Vocational-Technical Schools of Georgia. Six items regarding Personnel Records were presented to faculty members and students. Of these six items, day students identified two items as being "essential" with respect to student services needed, and four items as being "desirable." Faculty members and night school students each identified four items as "essential" and two as "desirable." Fifty items regarding Personnel Records were presented to administrators, and of these, 33 were identified as "essential," and 15 as "desirable." A listing of the items identified as essential or desirable by administrators is given below.

> A permanent personnel folder is developed on each prospective student which includes . . .
>
> —personal history questionnaire, application form, entrance tests, high school records, health form, interview notes, and other pertinent admission information.
>
> After the student enters the AV-T school other instruments are used in securing information for the student's personnel folder such as . . .
>
> —ratings by instructors, grades, comments, and observations.
>
> —standardized tests that are administered to the student as need for information occurs.

—an autobiography.
—a sheet designed to obtain information on the student when he drops out or leaves school.
—follow-up information of former students' success.

Instruments used for collecting data on students are designed so that . . .

—each is an integral part of the whole personnel record system.
—codes and marking systems are carefully explained on each form and are uniform.
—forms are compact and data are easily and accurately recorded, checked, and filed for later use.
—forms are dated before being filed.
—forms contain a blank space for adding pertinent information in the future that is not specified at this time.

Procedures are developed for . . .

—making personnel records easily accessible for professional use.
—the counselor to control confidential information such as counseling interview notes and personality test scores.
—checking all entry, assignment, withdrawal and transfer records.
—filing personnel information in sequential order so that relationship and progress can be easily traced.
—providing in an organized and systematic way facilities and equipment needed for maintaining records after the student leaves.
—instructing the staff in the use of personnel records through periodic in-service activities.

Personnel records at this school contain the following information on all students . . .

—identification data such as name, sex, place and date of birth (student number if data processing is used).
—marital status of student and number of children.
—occupation of wife or husband.
—full name, address, and telephone number of each parent or guardian.

—occupational, educational, and marital status of each parent.

—number of siblings older and younger than student.

—economic status of family such as home ownership.

—health record filled in by student.

—record of physical disabilities which could affect student's success in a course such as vision, hearing, injuries, missing limbs, posture and feet deformities, diabetes, and epilepsy.

—special achievements and honors received in and out of school.

—conduct or citizenship record.

—attendance and tardiness record; reason for excessive absence or tardiness.

—group scholastic aptitude test results.

—results of vocational interest inventories.

—tests of reading and math achievement.

—name and location of high schools attended with dates of attendance, complete academic record including courses, year taken, marks, and credits received.

—record of subsequent entry to other educational institutions.

—special talents and hobbies such as music, art, athletics, reading, etc.

—statement of student's interests.

—complete record of work experience.

—course selected; record of changes with reasons for the changes.

—attitude towards the AV-T school.

—reasons for dropping out of the AV-T school.

—statement of post-graduation intentions.

—date leaving or graduated from AV-T school.

—follow-up record after leaving AV-T school.

Personnel records on students are used by . . .

—a professional counselor to assist prospective students in selecting a course.

—a professional counselor to assist students in planning their next step after graduation from the AV-T school.

—a professional counselor to facilitate counseling interviews.

- —the school to send appropriate information about students to employers.
- —faculty members to facilitate the instructional program.

In his study, Bottoms (1966) also surveyed administrators, faculty members, and students regarding their perceptions as to the degree with which various student services were being provided by the Area Vocational-Technical Schools of Georgia. As a result of his findings, Bottoms makes the following recommendations with regards to Personnel Records:

> All respondent groups indicated that it was either essential or desirable for the area schools to develop an adequate personnel record system. Attention should be given to the use of computers and other modern techniques of collecting and recording information on students. Also, attention should be given to adequate clerical help for the area school counselor so that he is free of record keeping.

SPECIAL NEEDS: THE DISADVANTAGED

No data was gathered in this survey which would indicate the number of disadvantaged persons now being served by the Area schools in Minnesota, nor ways in which vocational programs are being adapted to individual needs. Certain expenses are involved in setting up any program designed specifically for handicapped or disadvantaged persons. For example, in most cases, the instructor who serves disadvantaged students will not be expected to teach as many students as he would if the class were composed of relatively normal students. Remedial classes may be needed to overcome deficiencies in basic knowledges and skills. Methods must be devised in order to motivate those who have had little or no experience of successful accomplishment. Facilities must be designed to accommodate certain handicaps. In some cases, the program must be modified in order to teach certain basic skills without demanding competency in the wider range of activities which would be expected of other students. For reasons such as these, it is doubtful that many Area schools have made a serious effort to recruit disadvantaged persons for training.

However, provision is made under the Vocational Education Amendments of 1968 for the use of federal funds to provide vocational education for persons who have physical and/or mental handicaps, as well as for those with academic, socioeconomic, and other handicaps that might prevent them from succeeding in the regular vocational program (p. 9). As a result of this provision, Area schools are expected to meet the needs of the disadvantaged in the regular programs and to develop special programs designed for handicapped persons when the regular program is inadequate.

Guidance would be central to such a program. Personal counseling, individually or in groups, would be essential in order to assist an individual with personal problems, and to assist in the difficult transition from the confines of a disadvantaged environment into the more rigorous demands of the world of work. The guidance staff of the school would also function in other important ways, to identify needs in the community, to assist the prospective student in the somewhat difficult process of realistic career choice, to adapt the program to individual needs, to gather and process the kinds of information that are needed by the school and the student, and to evaluate the success of the individual and the program.

ORGANIZATION OF GUIDANCE SERVICES

This monograph makes the assumption that the Area schools in Minnesota are designed to serve the needs of students and of the larger community in which it operates, and that it can serve the community best when its primary orientation is towards the needs of the individual student. It is assumed therefore that the function of the school is not to serve the needs of staff members, to indoctrinate students with any particular value system, to perpetuate the organization of the school itself, or any other function which fails to give primary consideration to the present and future needs of students. Within this framework, then, it might be appropriate to consider briefly the manner in which student services are organized within any given school.

The organization of student services will vary from one school to another. In a very small school, for example, one person, in all probability the counselor, will have primary responsibility for identifying student needs and for working to see that these needs are met. The counselor would offer vocational guidance to students, prospective students, and community members, and would assist individual students with specific problems; he would also function in the more expanded role of working with other staff members in order to effect those changes and improvements within the school which are in the best interests of students. While it would be his responsibility to provide all student services, or to see that they were provided, an examination of the duties involved would indicate that assistance in the form of adequate clerical help, volunteer or paid counseling assistants, and adequate equipment would be essential in order that these services be provided efficiently and effectively.

As the enrollment within the Area school increases and additional staff is needed for student services, the organization of these services within the school will become more complex. At this point it becomes necessary to make a most careful examination of those services which are being rendered by the school, together with those services which are needed but not provided for, and to determine methods by which the responsiblity for these services can be divided into reasonable and workable assignments to staff members. Moreover, plans must be made for a periodic evaluation of student services and of staff assignments in order that the most efficient and effective use of the training and abilities of staff members may be achieved at all times.

The suggestions which follow regarding the organization of student services are intended to stimulate thought and discussion within individual schools. It is important that the question of the organization of student services be discussed in every Area school and that staff assignments are made on the basis of the needs of students and in terms of the special abilities and training of individual staff members. Unless this is done, gross inefficiencies may occur in the use of staff time, accompanied, in all probability by considerable frustration to staff members.

Throughout this monograph, a number of student services were identified, but no attempt was made to indicate guidelines as to who should perform these services. In many of the Area schools of Minnesota, however, the responsibility for supplying these services to students is shared by counselors and coordinators, although the ways in which they are shared is not uniform from school to school. A clear delineation of duties to staff members within any given school is an essential aspect of good administration. The suggestions which follow are made in an attempt to help each school to clarify its thinking regarding the best use of the talents and training of its counselors and any other staff members responsible for student services.

The counseling staff would be responsible for identifying student needs and implementing student services. It is important that the student have one contact person throughout his stay within the school, regardless of any program change that might occur after he is enrolled. That person would be the counselor. In schools with more than one counselor, it is suggested that students be assigned to counselors on an alphabetical basis, in order that the student may be assured of having the same counselor throughout his stay in the school, and to provide each counselor with a broad overview of all programs within the school. It is suggested that in a school with more than one counselor, that a person with considerable counseling experience and knowledge of the operations of the school be designated as Head Counselor. The Head Counselor would have full responsibility for all counseling functions within the school and would report directly to the Director of the school. It is also suggested that the Head Counselor sit in on designated meetings of the Director and coordinators, in order that continual communication between counselors and coordinators may be assured.

The specific duties of a counselor would be those which bear a logical relationship to his delegated responsibilities. The counselor would provide vocational counseling to students, prospective students, and community members. He would interview all prospective students and would share in the process of deciding which students were to be admitted into a specific program (see section on Admissions Counseling, p. 78.) Admissions would be based on established selection criteria designed to give a reasonable estimate of the individual's likelihood of success in that program, combined with a consideration of the number of available openings in that program. He would plan the orientation program and the testing program, and would plan and supervise the keeping of student records. He would recommend program changes for students when such a change was deemed to be in the best interest of the student. He would engage in personal and group counseling of students. He would assist students in obtaining financial aid or in locating housing, and would refer students to other individuals or agencies when appropriate.

The counselor would conduct follow-up studies of former students in order to evaluate admissions criteria, he would establish systematic methods of identifying student needs within the school, and he would work with other staff members in order to achieve an environment conducive to student development and learning. In order that the counselor might be more "visible" and "real" to the students (Tamminen and Miller 1968), it is also suggested that the counselor take on special assignments such as the teaching of one course related to the psychological needs of students, or working with a student organization.

It should be noted, however, that certain counselor duties listed above are of the kind that might be neglected unless special precautions are taken. Orientation, testing programs, student records procedures, and various kinds of research are examples of these kinds of global duties. It is important then, in a school which has more than one counselor, that the Head Counselor delegate these duties to specific individuals in order that these important counselor functions will not be overlooked.

In this section, suggestions for the organization of student services have been presented. It is hoped that these suggestions might stimulate discussion and a careful consideration of the many duties involved in student services in order that these duties might be delegated to the person or persons best qualified to perform them. A student-oriented school is designed to serve the needs of students. It is important that each school give much thought to ways in which the needs of students can be met most effectively.

DIRECTIONS FOR FURTHER RESEARCH

This study also suggested other avenues for research which might be pursued by persons interested in implementing student services in the Area schools of Minnesota. They will be mentioned briefly here. With regard to student housing, individual schools might be interested in investigating the advantages and disadvantages of school-operated housing. An attempt could be made to determine the number of hours of employment that the majority of students could be expected to undertake without decreasing likelihood of success in their training program. Individual schools might assess social and recreational activities which are available to their students in order to determine whether or not these should be supplemented by the school. Some schools might design a survey intended to assess special post high educational needs of minorities and the disadvantaged within the community, and attempt to identify those needs which at present are not being met by facilities within the community.

Further research is also needed in order to assist those students who are undecided about career choice. The changing occupational scene, both local and national, needs to be under constant scrutiny by those who plan the course offerings for the Area schools. Research is needed on the effects of part-time and summer employment on career choice. Information is needed as to whether or not permitting students to sample several occupational programs before making a vocational commitment might be an effective method of assisting students in choosing a program that is appropriate for them. Expectancy tables are needed for use in career guidance, and selection criteria, such as is now being gathered by Project MINI-SCORE, needs to be continually updated. Research is needed in order to determine that most effective ways in which occupational information in general, and the course offerings of the Area school in particular, can be communicated to students and counselors in other educational institutions in the community and to the public at large.

Part C of the Vocational Education Amendments of 1968 (pp. 15-17) sets forth provisions regarding the use of federal funds for purposes of research and training in vocational education. It would seem that research is an important aspect of the effective functioning of any educational institution, and it would be to the advantage of the Area schools in Minnesota that every available assistance be used for purposes of research designed to improve the quality of occupational education and student services within the school. In some cases the research design will involve the use of innovative approaches when traditional practice has been found deficient.

EVALUATION OF RESEARCH DESIGN

This study was the first of its kind to be conducted in the Area schools of Minnesota, and it appears to be useful in identifying student needs as perceived by the students. However, the data obtained represents an evaluation of student needs at a particular point in time, and further research would be necessary in order to determine whether or not student needs are consistent during the year and from one year to another. For example, the questionnaire used in this survey was administered in the spring of the year, and the results of the survey may have been influenced to some extent by the time of the year at which it was administered.

Certain limitations of the present study have been mentioned in the course of this monograph. Students in one of the Area schools were not included in the survey, and it would appear that students in certain occupational programs were not surveyed by some of the schools which cooperated in the study. As a result, one program which was chosen for special consideration, machine operator, contained the responses of students from one school only. In addition, the data collected with respect to marital status could not be used because of errors in processing the data. Moreover, this survey produced no information regarding the special needs of minorities and the disadvantaged, nor information as to ways in which the Area schools are serving these students.

No test of significance was performed for any question in the Social and Recreational section. In that section, Question 33 appears to be the one that would provide the most useful summary of the opinions of various populations should a test of significance be desired for that section. However, there is some question as to how useful the tests of significance were to the purposes of this study. For most questions, the responses of all students in the survey appear to have provided the most meaningful information. Those questions which were subjected to statistical analysis tended to yield a large number of statistically significant differences, for those populations which enrolled a sizable number of students, but these differences, in many cases, were of little practical significance in the interpretation of the data. For the programs of machine operator and heavy equipment operator, however, which included a relatively small number of students, the tests of significance were useful in determining which of the observable differences were also statistically significant and in eliminating from consideration those which were not.

As the Area schools in Minnesota expand and improve their services to students, it is possible that student needs may change. Thus, there might be value in conducting a study such as this on a regular basis, perhaps every two years. The questionnaire which was used in this study is available for use by interested persons, and suggestions for revisions to the questionnaire have also been prepared. For those schools which have access to computer services, the effort involved in conducting such a study at regular intervals would be minimal, once a workable computer program had been written. The program which was used for this study is available for future use, if desired. Interested individuals should contact the Pupil Personnel Section, Minnesota State Department of Education, St. Paul, Minnesota, 55101.

This project was designed with the intent that several persons should be involved in the interpretation of the data, and throughout the course of this paper mention has been made of the fact that additional data is available for use by interested persons. Students of counseling and vocational education, Area school personnel, and others who are concerned with student needs in the Area schools are encouraged to undertake further examination of the data which has been collected and processed for this project.

This monograph has been a report of research designed to identify the needs of students in the Area Vocational Technical Schools of Minnesota, as these needs were perceived by the students. Certain student needs were identified, the implications of certain of the needs and concerns of students were discussed, and possible directions for further research were noted.

"Vocational education is the bridge between man and his work . . . and never before has attention to the individual as a person been so imperative" (Adv. Council on Voc. Ed., 1968). Although the major focus of the present study has been on the expressed needs of relatively large groups of students, it was never intended that individual needs should be overlooked. Rather, it was the purpose of this study to assist the Area schools in Minnesota to better serve the needs of the individual student through a greater awareness of the kinds of concerns which students may have expressed regarding themselves. It is to be hoped that the results of this survey may be of use to the Area schools of Minnesota as they seek to serve the individuals who come to them for training.

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APPENDIX A

NUMBER AND PERCENT OF ALL STUDENTS IN THE SURVEY WHO MARKED EACH RESPONSE

Tables included in this section:

Table 4 — Identification Data: Questions 3 - 9
Table 5 — Housing: Questions 10 - 16
Table 6 — Financial Information: Questions 17 - 23
Table 7 — School Information: Questions 24 - 31
Table 8 — Social and Recreational: Questions 32 - 37
Table 9 — Career Plans: Questions 38 - 52
Table 10 — Summary Questions: Questions 53 - 57

TABLE 4

IDENTIFICATION DATA: NUMBER AND PERCENT OF ALL STUDENTS IN THE SURVEY WHO MARKED EACH RESPONSE

TOTAL N = 6164

Response	Number Responding	Percent of Total N
Question 3: How old are you?		
(0) 16 years or under	7	.11
(1) 17 years old	33	.54
(2) 18 years old	2148	34.96
(3) 19 years old	2076	33.77
(4) 20 years old	870	14.15
(5) 21 years old	248	4.03
(6) 22 to 25 years old	364	5.92
(7) 26 to 40 years old	273	4.44
(8) 41 years or older	98	1.59
(9) Did not respond	29	.47
Question 4: What sex are you?		
(0) Male	4352	70.81
(1) Female	1780	28.96
(2) Did not respond	14	.23
Responses to Question 5 are omitted due to an error in processing the data		
Question 6: How much schooling did you have before you enrolled here?		
(0) I did not graduate from high school	269	4.38
(1) I am a high school graduate	5114	83.21
(2) I attended another post high vocational school	131	2.13
(3) I attended college	502	8.17
(4) I graduated from junior college	15	.24
(5) I graduated from college	10	.16
(6) Other	83	1.34
(7) Did not respond	22	.36
Question 7: What is your military status?		
(0) I am a veteran	724	11.78
(1) I am not a veteran	5395	87.78
(2) Did not respond	27	.44
Question 8: Are you a full time or part time student here?		
(0) Full time	6023	98.00
(1) Part time	111	1.81
(2) Did not respond	12	.19

Response	Number Responding	Percent of Total N
Question 9: How many months ago did you begin your present study?		
(0) Twelve or less	4808	78.23
(1) More than 12 months	1330	21.64
(2) Did not respond	8	.13

TABLE 5

HOUSING: NUMBER AND PERCENT OF ALL STUDENTS IN THE SURVEY WHO MARKED EACH RESPONSE

TOTAL N = 6146

Response	Number Responding	Percent of Total N
Question 10: How far is your home town from this school?		
(0) This is my home town	1934	31.47
(1) Less than 35 miles	1931	31.42
(2) At least 35 miles, but less than 50 miles	776	12.63
(3) At least 50 miles, but less than 100 miles	865	14.07
(4) At least 100 miles away	617	10.04
Question 11: Where are you living now?		
(0) In an apartment or house that I rent	1632	26.55
(1) I rent a room in a private home	972	15.82
(2) In some housing owned and operated by the school	69	1.12
(3) With my parents	2943	47.88
(4) With relatives other than my parents	151	2.46
(5) In a house I own	223	3.63
Other. (Responses (6), (7) and (8))	113	1.84
Question 12: How did you find a place to live when you came to this school?		
(0) I already had a place to live	3540	57.60
(1) Someone here at school helped me find a place	1007	16.38
(2) Another student helped me	336	5.47
(3) Friends or relatives helped me	238	3.87
(4) I just looked around myself until I found a place to live	730	11.88
(5) Other	178	2.90
Question 13: How much trouble did you have finding a place to live?		
(0) No trouble at all	4702	76.51
(1) Not much: I found a place in just a day or so	919	14.95
(2) Some trouble: I had to look around for a week or so to find a place	244	3.97
(3) Quite a bit of trouble: I thought for awhile I might not find a place	116	1.89
Question 14: If you do not live at home, how well satisfied are you with the place where you live now?		
(0) Very satisfied. I don't know how it could be better	921	14.99
(1) Satisfied. There isn't much to complain about	1573	25.59
(2) Somewhat dissatisfied. It's not what I was hoping to get	349	5.68
(3) Very dissatisfied. I really don't like it at all	123	2.00
(4) I live at home	2933	47.72

Response	Number Responding	Percent of Total N
Question 15: If you are living away from home, what things do you like about the place where you live now? Mark all which apply.		
(0) It's close to the school	1547	25.17
(1) It's nice and quiet so I can study	1087	17.69
(2) Most of my friends live here	809	13.16
(3) The food is good	569	9.26
(4) I like the idea of not having anybody tell me what to do	1144	18.61
(5) It's a very comfortable and attractive place to live	1298	21.12
(6) It doesn't cost me much	1388	22.58
(7) I live at home	3109	50.59
(8) Other	220	3.58
Question 16: If you are living away from home, what things do you dislike about the place where you live now? Mark all which apply.		
(0) It's too far from school	543	8.84
(1) It's too quiet	177	2.88
(2) There isn't anything to do in my spare time	877	14.27
(3) The rules are too strict	363	5.91
(4) It's so noisy that I can't do any studying	230	3.74
(5) It costs too much	367	5.97
(6) The house is pretty run down	406	6.61
(7) I like it here	1429	23.25
(8) I live at home	3090	50.28
(9) Other	92	1.50

TABLE 6

FINANCIAL INFORMATION: NUMBER AND PERCENT OF ALL STUDENTS IN THE SURVEY WHO MARKED EACH RESPONSE

TOTAL N = 6146

Response	Number Responding	Percent of Total N
Question 17: What are your sources of support while you are in school? Mark all which apply.		
(0) My parents	3028	49.27
(1) My savings	2523	41.05
(2) G. I. Bill	388	6.31
(3) Vocational Rehabilitation	230	3.74
(4) Bureau of Indian Affairs	17	.28
(5) Manpower Development Training	160	2.60
(6) I have a job	2908	47.32
(7) My wife (or husband) is working	319	5.19
(8) I have borrowed money to go to school	485	7.89
(9) Other	209	3.40
Question 18: How many persons, including yourself, are dependent on you for financial support?		
(0) None	3661	59.57
(1) One	1855	30.18
(2) Two	206	3.35
(3) Three	181	2.95
(4) Four	92	1.50
(5) Five or more	121	1.97
Question 19: Do you need help in finding a job to help pay expenses?		
(0) Yes	1525	24.81
(1) No	4565	74.28

Response	Number Responding	Percent of Total N
Question 20: If you have a job now, about how many hours a week do you work?		
(0) I don't have a job now	2539	41.31
(1) Less than 10 hours a week	411	6.69
(2) At least 10, but less than 20 hours a week	1081	17.59
(3) At least 20, but less than 30 hours a week	990	16.11
(4) At least 30, but less than 40 hours a week	530	8.62
(5) At least 40 hours a week	503	8.18
Question 21: If you have a job now, how did you find it?		
(0) The vocational counselor here at school helped me find it	397	6.46
(1) Some other staff member here at school helped me find it	381	6.20
(2) My high school counselor helped me find it	40	.65
(3) A friend or relative told me about it	1001	16.29
(4) I saw an ad in the paper	225	3.66
(5) I had a job before I enrolled in this school	1121	18.24
(6) I don't have a job now	2433	39.59
(7) Other	290	4.72
Question 22: How much trouble are you having getting enough money to make it through this school?		
(0) No trouble	2733	44.47
(1) It's a little hard, but I'm making it O.K.	2383	38.77
(2) It's very hard, but I can do it	832	13.54
(3) It's so hard that I may not be able to finish the course	114	1.85
(4) It's so hard that I think I'm definitely going to quit	29	.47
Question 23: If you had known before coming here that it would cost as much as it does, would you have come anyway?		
(0) Yes, I definitely would	4311	70.14
(1) I probably would have	1506	24.50
(2) I probably would not have	144	2.34
(3) No, I definitely would not have	88	1.43

TABLE 7

SCHOOL INFORMATION: NUMBER AND PERCENT OF ALL STUDENTS IN THE SURVEY WHO MARKED EACH RESPONSE

TOTAL N = 6146

Response	Number Responding	Percent of Total N
Question 24: How did you find out about this school? Mark all which apply.		
(0) I found it on my own	1925	31.32
(1) Friends or relatives told me about it	2134	34.72
(2) My parents wanted me to come here	1036	16.86
(3) A high school counselor suggested it to me	2512	40.87
(4) A high school teacher told me about it	853	13.88
(5) One of the instructors here talked to me	345	5.61
(6) The State Employment Agency recommended this school	250	4.07
(7) Other	257	4.18
Question 25: Did you visit the school and look around before signing up?		
(0) Yes	3459	56.28
(1) No	2632	42.82

Response	Number Responding	Percent of Total N
Question 26: Who did you talk with when you visited the school? Mark all which apply.		
(0) I didn't visit the school before signing up	2127	34.61
(1) I talked with the Director or the Assistant Director	1936	31.50
(2) I talked with a counselor at this school	1226	19.95
(3) I talked with an instructor	1451	23.61
(4) I talked with some other staff member	261	4.25
(5) I talked with one or more of the students here	1059	17.23
(6) I talked with somebody in the front office	532	8.66
(7) Nobody talked to me when I came to visit	281	4.57
(8) Other	99	1.61
Question 27: What is there about this school that makes it a good school for you? Mark all which apply.		
(0) Here we study only what we need to know, not things like poetry and history	3535	57.52
(1) Here they have the equipment the other schools just don't have	2421	39.39
(2) If you go here, you can get a job when you finish	2701	43.95
(3) Here the instructors know what they are talking about	2437	39.65
(4) I couldn't get a course like this in high school	2104	34.23
(5) They have a good extra-curricular program here	290	4.72
(6) They have a good schedule of social events here	259	4.21
(7) It's close to home	2263	36.82
(8) There is no charge for tuition here	3434	55.87
(9) Other	178	2.90
Question 28: Do you have to study after school in order to keep up here?		
(0) No. We do all our work here at school	1029	16.74
(1) Sometimes, but not often	2119	34.48
(2) I usually study for a while, but not as much as an hour	878	14.29
(3) I usually study for at least an hour after school	1003	16.32
(4) Yes. I always have to study after school to be ready for the next day	983	15.99
Question 29: How well do you feel that your high school education prepared you for the things that you are studying now?		
(0) Very well	1937	31.52
(1) Fairly well	2753	44.79
(2) Poor	1311	21.33
Question 30: What things do you find that are especially hard for you to do in the courses you are taking? Mark all which apply.		
(0) The math	1406	22.88
(1) Reading	621	10.10
(2) Writing answers to questions	615	10.01
(3) Explaining what I want to say	1369	22.27
(4) Understanding the technical language	817	13.29
(5) Layout or drawing	365	5.94
(6) Hand skills	230	3.74
(7) Operating tools and machines	179	2.91
(8) None of it is especially hard	2733	44.47
(9) Other	205	3.34
Question 31: How do you judge your own ability to learn in your classes?		
(0) High	1485	24.16
(1) Average	4472	72.76
(2) Low	171	2.78

TABLE 8

SOCIAL AND RECREATIONAL: NUMBER AND PERCENT OF ALL STUDENTS IN THE SURVEY WHO MARKED EACH RESPONSE

TOTAL N = 6164

Response	Number Responding	Percent of Total N
Question 32: Do you think that there is a friendly relationship among the students in this school?		
(0) Yes	3399	55.30
(1) Some people are friendly, but not everybody	2537	41.28
(2) No	180	2.93
Question 33: Do you feel that this school and the town in which you are now living provide enough recreational activities for you?		
(1)*Yes. There is always something to do when I have spare time	2900	47.19
(0) Some. There are some activities that I am interested in, but I wish there were more	1811	29.47
(2) No. There is never anything to do when I am not in school or studying	1353	22.01
Question 34: What kinds of activities would you like to see provided by the school or the town in which you are now living? Mark all which apply.		
(0) Intramural activities	1489	24.23
(1) Dances	2765	44.99
(2) Recreational sports	3081	50.13
(3) Competitive sports	2305	37.50
(4) Clubs	1395	22.70
(5) Student government	531	8.64
(6) Student newspaper	895	14.56
(7) A yearbook	949	15.44
(8) Movies	2075	33.76
(9) Other	365	5.94
Question 35: How well do your instructors know you?		
(0) All of them know me well	2513	40.89
(1) Most of them know me well	2059	33.50
(2) About half know me well and about half don't	805	13.10
(3) Most of them don't know me very well	697	11.34
Question 36: Do most of your close friends attend this school?		
(0) Yes	642	10.45
(1) No	3651	59.40
(2) Some do, but not all of them	1808	29.42
Question 37: Where do most of your close friends live?		
(0) This is my home town, so most of my friends are here	1383	22.50
(1) In this area	1783	29.01
(2) In my home town	2832	46.08

*Indicates response number as it appeared in the questionnaire.

TABLE 9

CAREER PLANS: NUMBER AND PERCENT OF ALL STUDENTS IN THE SURVEY WHO MARKED EACH RESPONSE

TOTAL N = 6146

Response	Number Responding	Percent of Total N
Question 38: How much trouble have you had in choosing a definite area of training?		
(0) A great deal. It's very hard to decide what to do	757	12.32
(1) Some trouble. I was pretty mixed up for awhile, but now I think that I know what I want to do	2468	40.16
(2) Very little. I guess I always knew the kind of work I wanted to do	2323	37.80
(3) I still haven't decided	558	9.08
Question 39: How many times have you changed courses since you've been enrolled in this or any other vocational-technical school?		
(0) None	5749	93.54
(1) Once	313	5.09
Two or more times. (Responses (2), (3) and (4)	73	1.18
Question 40: Do you think you will be changing courses later on?		
(0) No. Our school does not allow course changes	875	14.24
(1) No. I don't plan on changing courses	4626	75.27
(2) I might change courses, but I'm not sure that I will	442	7.19
(3) Yes. I think I will change to a different course	168	2.73
Question 41: How much did you know about your present training program before you started it?		
(0) I knew quite a bit about it before I signed up	1295	21.07
(1) I knew a little bit, but really not very much	3283	53.42
(2) I guess I really didn't know much about it at all before I began	1515	24.65
Question 42: Where did you receive information about the training program you are in? Mark all which apply.		
(0) From reading about it	2316	37.68
(1) From my high school counselor	2610	42.47
(2) From the vocational counselor here	1237	20.13
(3) From some other staff member at this school	521	8.48
(4) From a teacher or a course I took in high school	1018	16.56
(5) From jobs I have had	468	7.61
(6) From friends or relatives	2030	33.03
(7) I didn't know much about it	716	11.65
(8) Other	176	2.86
Question 43: How definite is your present choice of occupation?		
(0) Very definite	2175	35.39
(1) Fairly definite	2802	45.59
(2) Somewhat indefinite	815	13.26
(3) Very indefinite	321	5.22
Question 44: How well satisfied are you with the training program in which you are enrolled at the present time?		
(0) Well satisfied. I think it is a good program and really teaches me what I need to know	3370	54.83
(1) It's not too bad, but I guess it could be better in some ways	2527	41.12
(2) Very dissatisfied. I my opinion, it's not a good program at all	218	3.55

3

Response	Number Responding	Percent of Total N
Question 45: Do you think you will enjoy working on the job which you are planning to enter?		
(0) Yes. I think I will like it a lot	4987	81.14
(1) Maybe. I seldom think about the work I am going to do	959	15.60
(2) No. I guess everybody has to go to work sooner or later, but I don't look forward to it	153	2.49
Question 46: What do you think your chances are of finishing the course in which you are enrolled?		
(0) Excellent. I'm sure I will finish	3746	60.95
(1) Good. I think I will probably finish	1751	28.49
(2) Fair. I may or may not finish, depending on what comes up	516	8.40
(3) Poor. I probably will not finish	67	1.09
(4) Very poor. I definitely plan to quit as soon as I can	41	.67
Question 47: Do your parents approve of the decision you have made about the kind of work you want to do?		
(0) Yes. They like the idea	4645	75.58
(1) They haven't said much about it either way	1237	20.13
(2) No. They'd rather I did something else	145	2.36
Question 48: What does your wife (or husband) think about your choice of training program?		
(0) Thinks it's a good idea	709	11.54
(1) Hasn't said much about it	114	1.85
(2) Definitely doesn't want me to do this	51	.83
(3) I am not married	5119	83.29
Question 49: If you could be doing just as you wished ten or twelve years from now, would you be doing the job you are now preparing for?		
(0) Yes	2815	45.80
(1) No	935	15.21
(2) Unsure	2352	38.27
Question 50: How hard do you think it will be to line up a job when you finish your training here?		
(0) No trouble. I already know where I will be working	1083	17.62
(1) Easy. I don't think I'll have much trouble	3733	60.74
(2) Somewhat difficult. I think I'm going to need quite a bit of help	1133	18.43
(3) Very difficult. I don't know how to go about getting the kind of work that I want to do	135	2.20
Question 51: Does your home town have opportunities for employment in the kind of work that you are preparing to do?		
0) Yes	2538	41.30
(1) No	2241	36.46
(2) There are a few jobs, but not many	1327	21.59
Question 52: How much trouble would it be to you if you had to move out of town to find a job?		
(0) No trouble at all. I plan to move out of town when I finish school	3449	56.12
(1) Some. I'd rather stay in my home town if I could	2067	33.63
(2) I definitely don't want to leave my home town unless I absolutely have to	538	8.75

TABLE 10

SUMMARY QUESTIONS: NUMBER AND PERCENT OF ALL STUDENTS IN THE SURVEY WHO MARKED EACH RESPONSE

TOTAL N = 6146

Response	Number Responding	Percent of Total N
Question 53: What things were of greatest concern to you when you first began attending this school? Mark all which apply.		
(0) Getting a job	1882	30.62
(1) Finding a place to live	803	13.07
(2) Transportation	1443	23.48
(3) Trying to work and go to school at the same time	2021	32.88
(4) Making friends	1506	24.50
(5) Finding something to do in my spare time	965	15.70
(6) Making a career choice	1291	21.01
(7) Personal or family problems	802	13.05
(8) None	1020	16.60
(9) Other	167	2.72
Question 54: What things bother you most at the present time? Mark all which apply.		
(0) Money problems	3030	49.30
(1) Family or personal problems	1349	21.95
(2) Unsure about career plans	1485	24.16
(3) Making friends	279	4.54
(4) Bored with school	1134	18.45
(5) I don't like the place where I am living	482	7.84
(6) I need some help with my school work	462	7.52
(7) Finding something to do in my spare time	1033	16.81
(8) None	1319	21.46
(9) Other	206	3.35
Question 55: What kinds of student services have you received since you've been here at this school? Mark all which apply.		
(0) Information about careers and job opportunities	1911	31.09
(1) Finding a job	1278	20.79
(2) Someone to talk to about my problems	848	13.80
(3) Help in locating a place to live	600	9.76
(4) Telling me where I can get financial help	543	8.84
(5) Advice about the courses I should take	690	11.23
(6) Classes to help catch up on subjects I missed in high school	209	3.40
(7) Orientation to the school	788	12.82
(8) None	2330	37.91
(9) Other	72	1.17
Question 56: What people have given you assistance or service in any of the problems you have had here at school? Mark all which apply.		
(0) The Director or Assistant Director	995	16.19
(1) A counselor at this school	1299	21.14
(2) An instructor or department head	2597	42.26
(3) The employment office at this school	153	2.49
(4) Friends and relatives	1704	27.73
(5) None	1695	27.58
(6) Other	111	1.81

Response	Number Responding	Percent of Total N
Question 57: What kinds of assistance and services do you feel should be made available for students? Mark all which apply.		
(0) Help with career choice and planning	2792	45.43
(1) Help in finding a job	3581	58.27
(2) Somebody to talk to about personal problems	1614	26.26
(3) Help in locating a place to live	1644	26.75
(4) Telling students where they can get financial assistance	2002	32.57
(5) Advice about the right courses to take	2068	33.65
(6) Special classes that students need	1701	27.68
(7) Some social and recreational activities	2882	46.89
(8) None	654	10.64
(9) Other	137	2.23

APPENDIX B

OBSERVABLE DIFFERENCES: MALE vs. FEMALE

An observable difference was assumed whenever the percentage of male students responding to an item on any question differed by ten percent or more from the percentage of female students who responded to the same item. This table records the number of male and female students and the percentage of each population who marked each response for each of these responses where an observable difference of ten percent or more was found. Number and percent of the total student population who responded to the same item are included for comparison purposes. Questions 1, 4 and 5 are omitted. The number of persons in each of the three populations under consideration are these:

All Students in Survey: 6164
Male Students: 4352
Female Students: 1780

Occupational Code: In Question 2, occupational programs were identified by code number. Observable differences of ten percent or more between number of male and female stuents enrolled were found for the following occupational programs (see Table 3, Page 14):

(10) Clerical
(12) Secretarial
(28) Practical Nursing
(35) Auto Mechanics
(61) Cosmetology

Response Number: The first number of the sequence refers to the number of the question. The number in parentheses refers to the response number of that question.

Ex. Response Number 3 (2) refers to response 2 of question number3.

A copy of the questionnaire is included in Appendix E in order that individual questions and specific responses may be identified.

Occupational Code	All Students	Male	Female
(10)	349 5.68%	15 .34%	334 18.77%
(12)	403 6.56%	6 .14%	397 22.30%
(28)	356 5.79%	4 .09%	352 19.78%
(35)	588 9.57%	575 13.22%	11 .62%
(61)	198 3.22%	6 .14%	191 10.73%

Response Number	All Students	Male	Female
3 (2)	2149 34.96%	1228 28.21%	920 51.69%
3 (4)	870 14.15%	725 16.66%	142 7.98%

Response Number	All Students	Male	Female
9 (0)	4809 78.23%	3076 70.66%	1726 96.97%
9 (1)	1330 21.64%	1271 29.20%	52 2.92%
11 (3)	2943 47.88%	2278 52.34%	655 36.80%
12 (0)	3540 57.60%	2646 60.80%	885 49.72%
14 (4)	2933 47.74%	2222 51.06%	705 39.61%
15 (5)	1298 21.12%	723 16.61%	573 32.19%
15 (7)	3109 50.59%	2365 54.34%	739 41.52%
16 (7)	1429 23.25%	886 20.36%	542 30.45%
16 (8)	3090 50.28%	2340 53.77%	744 41.80%
17 (0)	3028 49.27%	1875 43.08%	1147 64.44%
17 (6)	2908 47.32%	2316 53.22%	589 33.09%
18 (0)	3661 59.57%	2381 54.71%	1271 71.40%
20 (0)	2539 41.31%	1493 34.31%	1040 58.43%
20 (3)	990 16.11%	853 19.60%	136 7.64%
20 (5)	503 8.18%	487 11.19%	14 .79%
21 (3)	1001 16.29%	847 19.46%	152 8.54%
21 (5)	1121 18.24%	922 21.19%	198 11.12%
21 (6)	2433 39.59%	1418 32.58%	1010 56.74%
27 (3)	2437 39.65%	1859 42.72%	575 32.30%
28 (0)	1029 16.74%	958 22.01%	67 3.76%
28 (1)	2119 34.48%	1746 40.12%	371 20.84%
28 (3)	1003 16.32%	552 12.68%	451 25.34%

Response Number	All Students	Male	Female
28 (4)	983 15.99%	369 8.48%	610 34.27%
34 (1)	2765 44.99%	1783 40.97%	975 54.78%
34 (2)	3081 50.13%	2036 46.78%	1039 58.37%
34 (3)	2305 37.50%	1862 42.78%	439 24.66%
34 (4)	1395 22.70%	834 19.16%	560 31.46%
34 (6)	895 14.56%	467 10.73%	427 23.99%
35 (0)	2513 40.89%	1918 44.07%	588 33.03%
40 (1)	4626 75.27%	3127 71.85%	1491 83.76%
42 (0)	2316 37.68%	1415 32.51%	899 50.51%
52 (1)	2067 33.63%	1603 36.83%	461 25.90%
53 (2)	1443 23.48%	854 19.62%	587 32.98%
53 (3)	2021 32.88%	1611 37.02%	408 22.92%
53 (4)	1506 24.50%	875 20.11%	626 35.17%
54 (1)	1349 21.95%	803 18.45%	545 30.62%
55 (7)	788 12.82%	423 9.72%	363 20.39%
56 (4)	1704 27.73%	1021 23.46%	681 38.26%
57 (0)	2792 45.43%	1836 42.19%	953 53.54%
57 (2)	1614 26.26%	974 22.38%	637 35.79%
57 (4)	2002 32.57%	1282 29.46%	718 40.34%
57 (7)	2882 46.89%	1872 43.01%	1008 56.63%

APPENDIX C

OBSERVABLE DIFFERENCES: EIGHT SELECTED OCCUPATIONAL PROGRAMS vs. TOTAL STUDENT POPULATION

An observable difference was assumed whenever the percentage of students in one or more of the selected occupational programs who responded to an item on any question differed by ten percent or more from the percentage of the total student population who responded to the same item. This table records the number of students in any of the selected occupational programs and the percentage of that population who marked a given response, together with the number and percent of the total student population who marked the same response, whenever a difference of ten percent or more was found on any response. Questions 1, 2, 4 and 5 are omitted. The name of the occupational program and the number of persons in that program who were included in the survey are given here:

Machinist: 311
Machine Operator: 33
Heavy Equipment Operation and Maintenance: 40
Electronics: 421
Clerical: 349
Secretarial: 403
Practical Nursing: 356
Cosmetology: 198

Response Number: The first number of the sequence refers to the number of the question. The number in parentheses refers to the response number of that question.

Ex. Response Number 3 (2) refers to response 2 of question number 3.

A copy of the questionnaire is included in Appendix E in order that individual questions and specific responses may be identified.

Response Number	Number and Percent of All Students Who Marked Response	Number and Percent of Students in Occupational Program Who Marked Response	
3 (2)	2149 34.96%	Mach. Op.	4 12.12%
		Elec.	91 21.56%
		Cler.	212 60.74%
		Sec.	255 63.28%
		Cosm.	97 48.99%
3 (3)	2076 33.77%	Mach. Op.	6 18.18%
		Heavy Equip.	17 42.50%
3 (7)	273 4.44%	Mach. Op.	9 27.27%
3 (8)	98 1.59%	Mach. Op.	9 27.27%

Response Number	All Students	Occupational Program	
6 (0)	269 4.38%	Mach. Op.	19 57.58%
6 (1)	5115 83.21%	Mach. Op.	12 36.36%
		Cler.	334 95.70%
		Sec.	377 93.55%
7 (0)	724 11.78%	Mach. Op.	14 42.42%
7 (1)	5396 87.78%	Mach. Op.	19 57.58%
9 (0)	4809 78.23%	Machinist	206 66.24%
		Mach. Op.	33 100.0%
		Heavy Equip.	20 50.00%
		Elec.	248 58.77%
		Cler.	345 98.85%
		Sec.	400 99.26%
		Nurs.	349 98.03%
		Cosm.	198 100.00%
9 (1)	1330 21.64%	Machinist	104 33.44%
		Heavy Equip.	20 50.00%
		Elec.	173 41.00%
		Cler.	4 1.15%
		Sec.	3 .74%
		Nurs.	6 1.69%
10 (0)	1934 31.47%	Mach. Op.	2 6.06%
		Elec.	178 42.28%
10 (1)	1931 31.42%	Heavy Equip.	5 12.50%
10 (4)	617 10.04%	Heavy Equip.	27 67.50%

Response Number	All Students	Occupational Program	
11 (0)	1632 26.55%	Heavy Equip.	4 10.00%
11 (1)	972 15.82%	Mach. Op.	11 33.33%
		Heavy Equip.	27 67.50%
11 (2)	69 1.12%	Nurs.	44 12.36%
11 (3)	2943 47.88%	Machinist	183 58.84%
		Mach. Op.	5 15.15%
		Nurs.	73 20.51%
12 (0)	3540 57.60%	Heavy Equip.	8 20.00%
		Elec.	287 68.17%
		Nurs.	162 45.51%
12 (1)	1007 16.38%	Mach. Op.	12 36.36%
		Heavy Equip.	23 57.50%
		Nurs.	100 28.09%
13 (0)	4702 76.51%	Heavy Equip.	36 90.00%
14 (0)	921 14.99%	Mach. Op.	14 42.42%
		Heavy Equip.	10 25.00%
14 (1)	1573 25.59%	Heavy Equip.	22 55.00%
14 (4)	2933 47.72%	Mach. Op.	10 30.30%
		Heavy Equip.	7 17.50%
		Nurs.	117 32.87%
15 (0)	1547 25.17%	Heavy Equip.	22 55.00%
		Nurs.	129 36.24%
15 (1)	1087 17.69%	Nurs.	110 30.90%

Response Number	All Students	Occupational Program	
15 (2)	809 13.16%	Heavy Equip.	12 30.00%
15 (5)	1298 21.12%	Heavy Equip.	13 32.50%
		Cler.	126 36.10%
		Sec.	137 34.00%
		Cosm.	63 31.82%
15 (6)	1388 22.58%	Heavy Equip.	15 37.50%
15 (6)		Nurs.	133 37.36%
15 (7)	3109 50.59%	Mach. Op.	13 39.39%
		Heavy Equip.	8 20.00%
		Nurs.	126 35.39%
16 (3)	363 5.91%	Nurs.	69 19.38%
16 (7)	1429 23.25%	Heavy Equip.	15 37.50%
		Cler.	118 33.81%
		Sec.	134 33.25%
		Cosm.	68 34.34%
16 (8)	3090 50.28%	Mach. Op.	13 39.39%
		Heavy Equip.	7 17.50%
		Nurs.	128 35.96%
17 (0)	3028 49.27%	Mach. Op.	7 21.21%
		Cler.	255 73.07%
		Sec.	261 64.76%
		Cosm.	133 67.17%
17 (1)	2523 41.05%	Mach. Op.	2 6.06%

Response Number	All Students	Occupational Program	
		Heavy Equip.	21 52.50%
		Nurs.	198 55.62%
17 (3)	230 3.74%	Mach. Op.	19 57.58%
17 (6)	2908 47.32%	Mach. Op.	3 9.09%
		Heavy Equip.	14 35.00%
		Cler.	108 30.95%
		Nurs.	80 22.47%
		Cosm.	34 17.17%
17 (9)	209 3.40%	Heavy Equip.	7 17.50%
18 (0)	3661 59.57%	Mach. Op.	9 27.27%
		Cler.	267 76.50%
		Sec.	283 70.22%
		Nurs.	260 73.03%
		Cosm.	169 85.35%
18 (1)	1855 30.18%	Heavy Equip.	8 20.00%
		Cosm.	23 11.62%
18 (3)	181 2.95%	Mach. Op.	5 15.15%
18 (4)	92 1.50%	Mach. Op.	4 12.12%
18 (5)	121 1.97%	Mach. Op.	7 21.21%
19 (0)	1525 24.81%	Mach. Op.	19 57.58%
		Heavy Equip.	15 37.50%
		Nurs.	33 9.27%
19 (1)	4565 74.28%	Mach. Op.	14 42.42%

Response Number	All Students	Occupational Program	
		Heavy Equip.	25 62.50%
		Nurs.	319 89.61%
20 (0)	2539 41.31%	Mach. Op.	25 75.76%
		Cler.	216 61.89%
		Nurs.	244 68.54%
		Cosm.	145 73.23%
20 (2)	1081 17.59%	Mach. Op.	2 6.06%
		Sec.	113 28.04%
20 (3)	990 16.11%	Nurs.	15 4.21%
		Cosm.	7 3.54%
21 (3)	1001 16.29%	Mach. Op.	1 3.03%
		Heavy Equip.	1 2.50%
		Nurs.	21 5.90%
21 (5)	1121 18.24%	Mach. Op.	2 6.06%
		Cosm.	16 8.08%
21 (6)	2433 39.59%	Mach. Op.	25 75.76%
		Cler	212 60.74%
		Nurs.	237 66.57%
		Cosm.	142 71.72%
22 (0)	2733 44.47%	Heavy Equip.	8 20.00%
		Sec.	223 55.33%
22 (1)	2383 38.77%	Mach. Op.	7 21.21%
		Nurs.	175 49.16%

Response Number	All Students	Occupational Program	
22 (2)	832 13.54%	Mach. Op.	9 27.27%
		Heavy Equip.	12 30.00%
24 (0)	1925 31.32%	Mach. Op.	4 12.12%
24 (1)	2134 34.72%	Mach. Op.	7 21.21%
		Nurs.	173 48.60%
24 (2)	1036 16.86%	Heavy Equip.	2 5.00%
24 (3)	2512 40.87%	Mach. Op.	7 21.21%
24 (4)	853 13.88%	Mach. Op.	1 3.03%
24 (6)	250 4.07%	Mach. Op.	15 45.45%
25 (0)	3459 56.28%	Heavy Equip.	30 75.00%
		Nurs.	143 40.17%
25 (1)	2632 42.82%	Heavy Equip.	10 25.00%
		Nurs.	209 58.71%
26 (0)	2127 34.61%	Heavy Equip.	9 22.50%
		Nurs.	167 46.91%
		Cosm.	91 45.96%
26 (1)	1936 31.50%	Mach. Op.	3 9.09%
		Cosm.	30 15.15%
26 (2)	1226 19.95%	Mach. Op.	15 45.45%
		Heavy Equip.	23 57.50%
		Nurs.	32 8.99%
26 (3)	1451 23.61%	Mach. Op.	3 9.09%
		Heavy Equip.	18 45.00%

Response Number	All Students	Occupational Program	
26 (5)	1059 17.23%	Mach. Op.	1 3.03%
27 (0)	3535 57.52%	Nurs.	167 46.91%
		Cosm.	93 46.97%
27 (1)	2421 39.39%	Heavy Equip.	30 75.00%
		Nurs.	40 11.24%
		Cosm.	42 21.21%
27 (3)	2437 39.65%	Cler.	85 24.36%
		Sec.	111 27.54%
27 (4)	2104 34.23%	Heavy Equip.	20 50.00%
		Cosm.	90 45.45%
27 (7)	2263 36.82%	Mach. Op.	4 12.12%
		Heavy Equip.	5 12.50%
		Nurs.	169 47.47%
27 (8)	3434 55.87%	Mach. Op.	6 18.18%
		Sec.	279 69.23%
28 (0)	1029 16.74%	Machinist	95 30.55%
		Mach. Op.	9 27.27%
		Heavy Equip.	26 65.00%
		Cler.	4 1.15%
		Sec.	4 .99%
		Nurs.	2 .56%
		Cosm.	6 3.03%
28 (1)	2119 34.48%	Heavy Equip.	9 22.50%

Response Number	All Students	Occupational Program	
		Sec.	70 17.37%
		Nurs.	23 6.46%
28 (3)	1003 16.32%	Heavy Equip.	1 2.50%
		Cler.	96 27.51%
		Nurs.	107 30.06%
28 (4)	983 15.99%	Machinist	18 5.79%
		Cler.	93 26.65%
		Sec.	169 41.94%
		Nurs.	178 50.00%
29 (0)	1937 31.52%	Sec.	181 44.91%
29 (1)	2753 44.79%	Cler.	194 55.59%
		Cosm.	64 32.32%
29 (2)	1311 21.33%	Mach. Op.	2 6.06%
		Heavy Equip.	15 37.50%
		Sec.	35 8.68%
30 (0)	1406 22.88%	Mach. Op.	12 36.36%
		Heavy Equip.	3 7.50%
		Cler.	115 32.95%
		Cosm.	3 1.52%
30 (3)	1369 22.27%	Cler.	121 34.67%
		Nurs.	118 33.15%
30 (5)	365 5.94%	Mach. Op.	7 21.21%
30 (8)	2733 44.47%	Mach. Op.	10 30.30%

Response Number	All Students	Occupational Program	
		Heavy Equip.	27 67.50%
		Nurs.	121 33.99%
		Cosm.	109 55.05%
31 (0)	1485 24.16%	Mach. Op.	4 12.12%
		Heavy Equip.	18 45.00%
31 (1)	4472 72.76%	Heavy Equip.	22 55.00%
32 (0)	3399 55.30%	Mach. Op.	24 72.73%
		Nurs.	155 43.54%
32 (1)	2537 41.28%	Mach. Op.	8 24.24%
33 (1)	2900 47.19%	Mach. Op.	9 27.27%
33 (0)	1811 29.47%	Mach. Op.	21 63.64%
		Heavy Equip.	7 17.50%
33 (2)	1353 22.01%	Mach. Op.	2 6.0 %
		Heavy Equip.	15 37.50%
34 (0)	1489 24.23%	Cosm.	26 13.13%
34 (1)	2765 44.99%	Mach. Op.	8 24.24%
		Cler.	206 59.03%
		Sec.	224 55.58%
		Cosm.	124 62.63%
34 (2)	3081 50.13%	Machinist	123 39.55%
		Mach. Op.	12 36.36%
		Heavy Equip.	25 62.50%
		Nurs.	217 60.96%

Response Number	All Students	Occupational Program	
34 (3)	2305 37.50%	Mach. Op.	8 24.24%
		Cler.	68 19.48%
		Nurs.	75 21.07%
		Cosm.	40 20.20%
34 (4)	1395 22.70%	Heavy Equip.	5 12.50%
		Cler.	121 34.67%
		Sec.	147 36.48%
34 (6)	895 14.56%	Heavy Equip.	1 2.50%
		Cler.	101 28.94%
		Sec.	118 29.28%
34 (7)	949 15.44%	Cosm.	56 28.28%
34 (8)	2075 33.76%	Cler.	158 45.27%
35 (0)	2513 40.89%	Mach. Op.	25 75.76%
		Cosm.	106 53.54%
35 (1)	2059 33.50%	Mach. Op.	6 18.18%
		Cler.	178 51.00%
		Sec.	188 46.65%
36 (1)	3651 59.40%	Cler.	169 48.42%
		Nurs.	279 78.37%
36 (2)	1808 29.42%	Nurs.	57 16.01%
37 (1)	1783 29.01%	Mach. Op.	6 18.18%
		Heavy Equip.	5 12.50%
37 (2)	2832 46.08%	Mach. Op.	22 66.67%

Response Number	All Students	Occupational Program	
		Heavy Equip.	35. 87.50%
		Elec.	141 33.49%
38 (1)	2468 40.16%	Heavy Equip.	10 25.00%
		Cler.	178 51.00%
		Nurs.	86 24.16%
		Cosm.	51 25.76%
38 (2)	2323 37.80%	Heavy Equip.	28 70.00%
		Cler.	92 26.36%
		Nurs.	251 70.51%
		Cosm.	115 58.08%
40 (1)	4626 75.27%	Sec.	352 87.34%
41 (0)	1295 21.07%	Mach. Op.	2 6.06%
		Nurs.	151 42.42%
41 (2)	1515 24.65%	Sec.	58 14.93%
		Nurs.	42 11.80%
42 (0)	2316 37.68%	Machinist	85 27.33%
		Mach. Op.	6 18.18%
		Heavy Equip.	11 27.50%
		Cler.	175 50.14%
		Sec.	222 55.09%
		Nurs.	209 58.71%
		Cosm.	99 50.00%
42 (1)	2610 42.47%	Mach. Op.	8 24.24%

Response Number	All Students	Occupational Program	
		Heavy Equip.	22 55.00%
		Cler.	203 58.17%
		Cosm.	111 56.06%
42 (2)	1237 20.13%	Mach. Op.	10 30.30%
42 (4)	1018 16.56%	Nurs.	16 4.49%
		Cosm.	8 4.04%
42 (6)	2030 33.03%	Mach. Op.	6 18.18%
		Nurs.	181 50.84%
		Cosm.	101 51.01%
42 (7)	716 11.65%	Mach. Op.	9 27.27%
43 (0)	2175 35.39%	Mach. Op.	17 51.52%
		Heavy Equip.	24 60.00%
		Cler.	81 23.21%
		Nurs.	275 77.25%
43 (1)	2802 45.59%	Mach. Op.	7 21.21%
		Heavy Equip.	11 27.50%
		Cler.	199 57.02%
		Nurs.	71 19.94%
43 (2)	815 13.26%	Mach. Op.	8 24.24%
		Nurs.	4 1.12%
44 (0)	3370 54.83%	Mach. Op.	22 66.67%
		Heavy Equip.	27 67.50%
		Nurs.	257 72.19%

Response Number	All Students	Occupational Program	
44 (1)	2527 41.12%	Mach. Op.	10 30.30%
		Heavy Equip.	12 30.00%
		Nurs.	93 26.12%
45 (0)	4987 81.14%	Nurs.	348 97.75%
45 (1)	959 15.60%	Nurs.	4 1.12%
46 (0)	3746 60.95%	Heavy Equip.	33 82.50%
		Sec.	320 79.40%
46 (1)	1751 28.49%	Heavy Equip.	7 17.50%
		Nurs.	143 40.17%
47 (0)	4645 75.58%	Nurs.	314 88.20%
47 (1)	1237 20.13%	Nurs.	17 4.78%
48 (0)	709 11.54%	Mach. Op.	18 54.55%
48 (8)	5119 83.29%	Mach. Op.	12 36.36%
49 (0)	2815 45.80%	Mach. Op.	22 66.67%
		Heavy Equip.	26 65.00%
		Cler.	98 28.08%
		Sec.	112 27.79%
		Nurs.	267 75.00%
49 (2)	2352 38.27%	Mach. Op.	7 21.21%
		Heavy Equip.	11 27.50%
		Nurs.	68 19.10%
50 (0)	1083 17.62%	Cler.	15 4.30%
		Sec.	21 5.21%

Response Number	All Students	Occupational Program	
		Nurs.	99 27.81%
50 (1)	3733 60.74%	Mach. Op.	13 39.39%
50 (2)	1133 18.43%	Mach. Op.	10 30.30%
		Cler.	131 37.54%
		Nurs.	6 1.69%
51 (0)	2538 41.30%	Heavy Equip.	21 52.50%
		Cler.	88 25.21%
		Sec.	98 24.32%
		Nurs.	258 72.47%
		Cosm.	110 55.56%
51 (1)	2241 36.46%	Heavy Equip.	10 25.00%
		Elec.	198 47.03%
		Nurs.	73 20.51%
		Cosm.	38 19.19%
51 (2)	1327 21.59%	Cler.	114 32.66%
		Sec.	136 33.75%
		Nurs.	21 5.90%
52 (0)	3449 56.12%	Mach. Op.	14 42.42%
		Heavy Equip.	29 72.50%
52 (1)	2067 33.63%	Mach. Op.	15 45.45%
		Sec.	89 22.08%
		Nurs.	78 21.91%
53 (0)	1882 30.62%	Nurs.	21 5.90%

Response Number	All Students	Occupational Program	
53 (2)	1443 23.48%	Nurs.	125 35.11%
		Cosm.	74 37.37%
53 (3)	2021 32.88%	Mach. Op.	4 12.12%
		Heavy Equip.	6 15.00%
		Nurs.	54 15.17%
		Cosm.	36 18.18%
53 (4)	1506 24.50%	Mach. Op.	2 6.06%
		Heavy Equip.	5 12.50%
		Cler.	158 45.27%
		Sec.	143 35.48%
53 (5)	965 15.70%	Heavy Equip.	17 42.50%
53 (6)	1291 21.01%	Nurs.	27 7.58%
53 (8)	1020 16.60%	Mach. Op.	9 27.27%
54 (0)	3030 49.30%	Heavy Equip.	26 65.00%
54 (1)	1349 21.95%	Cler.	116 33.24%
		Sec.	129 32.01%
54 (2)	1485 24.16%	Heavy Equip.	3 7.50%
		Nurs.	27 7.58%
54 (4)	1134 18.45%	Mach. Op.	1 3.03%
		Heavy Equip.	2 5.00%
		Nurs.	24 6.74%
54 (7)	1033 16.81%	Heavy Equip.	14 35.00%
54 (8)	1319 21.46%	Cosm.	64 32.32%

Response Number	All Students	Occupational Program	
55 (0)	1911 31.09%	Mach. Op.	17 51.52%
		Heavy Equip.	7 17.50%
		Cler.	144 41.26%
		Sec.	186 46.15%
		Cosm.	31 15.66%
55 (1)	1278 20.79%	Nurs.	30 8.43%
55 (2)	848 13.80%	Heavy Equip.	1 2.50%
		Nurs.	119 33.43%
55 (3)	600 9.76%	Heavy Equip.	10 25.00%
55 (4)	543 8.84%	Heavy Equip.	8 20.00%
55 (7)	788 12.82%	Nurs.	140 39.33%
55 (8)	2330 37.91%	Mach. Op.	5 15.15%
		Sec.	105 26.05%
56 (1)	1299 21.14%	Heavy Equip.	14 35.00%
56 (2)	2597 42.26%	Machinist	94 30.23%
		Heavy Equip.	21 52.50%
		Nurs.	233 65.45%
		Cosm.	60 30.30%
56 (4)	1704 27.73%	Mach. Op.	5 15.15%
		Cler.	161 46.13%
		Sec.	157 38.96%
56 (5)	1695 27.58%	Nurs.	56 15.73%

Response Number	All Students	Occupational Program	
57 (0)	2792 45.43%	Mach. Op.	10 30.30%
		Heavy Equip.	7 17.50%
		Cler.	222 63.61%
		Sec.	240 59.55%
57 (1)	3581 58.27%	Cler.	253 72.49%
		Sec.	280 69.48%
		Nurs.	160 44.94%
57 (2)	1614 26.26%	Mach. Op.	5 15.15%
		Heavy Equip.	6 15.00%
		Sec.	156 38.71%
		Nurs.	157 44.10%
57 (3)	1644 26.75%	Mach. Op.	4 12.12%
57 (4)	2002 32.57%	Nurs.	186 52.25%
57 (5)	2068 33.65%	Heavy Equip.	7 17.50%
		Cler.	163 46.70%
		Sec.	186 46.15%
57 (6)	1701 27.68%	Mach. Op.	4 12.12%
		Heavy Equip.	4 10.00%
57 (7)	2882 46.89%	Mach. Op.	4 12.12%
		Sec.	242 60.05%

APPENDIX D

TABLE OF STATISTICALLY SIGNIFICANT DIFFERENCES

All reported differences are significant at the .01 level.

NS indicates difference is not significant at the .01 level.

TABLE 11

MALE vs. FEMALE

Question Number	Chi Square	Degrees of Freedom
13	14.64	3
14**	NS	
22	41.15	4
38	19.58	3
43	16.82	3
50	99.99	3

****Response 4 omitted from calculations.**

MALE vs. FEMALE

Response Number	Chi Square	Response Number	Chi Square	Response Number	Chi Square
Degrees of Freedom = 1		Degrees of Freedom = 1		Degrees of Freedom = 1	
27 (0)	NS	30 (0)	NS	49 (0)	16.48
(1)	40.19	(1)	NS	(1)	12.97
(2)	NS	(2)	NS	(2)	NS
(3)	56.79	(3)	68.42		
(4)	NS	(4)	53.49		
(5)	NS	(5)	58.36		
(6)	NS	(6)	45.87		
(7)	51.85	(7)	NS		
(8)	19.10	(8)	19.83		
(9)	NS	(9)	14.10		

Response Number	Chi Square	Response Number	Chi Square	Response Number	Chi Square
Degrees of Freedom = 1		Degrees of Freedom = 1		Degrees of Freedom = 1	
53 (0)	30.13	54 (0)	30.97	57 (0)	65.20
(1)	7.30	(1)	108.30	(1)	28.44
(2)	124.60	(2)	NS	(2)	116.50
(3)	113.00	(3)	NS	(3)	40.26
(4)	154.20	(4)	9.64	(4)	67.54
(5)	NS	(5)	20.13	(5)	19.97
(6)	10.39	(6)	18.23	(6)	8.96
(7)	75.37	(7)	NS	(7)	93.46
(8)	NS	(8)	NS	(8)	31.78
(9)	10.46	(9)	NS	(9)	NS

EIGHT SELECTED OCCUPATIONAL PROGRAMS vs. ALL STUDENTS

Occupational Programs by Occupational Code Number:

(29) Machinist
(32) Machine Operator
(40) Heavy Equipment Operation and Maintenance
(50) Electronics
(10) Clerical
(12) Secretarial
(28) Practical Nursing
(61) Cosmetology

Question Number	df†	Chi Square by Occupational Code: Unmodified							
		(29)	(32)	(40)	(50)	(10)	(12)	(28)	(61)
13	3	NS	NS	NS	NS	NS	NS	NS	NS
14**	3	NS	NS	NS	NS	NS	NS	NS	NS
22	4	NS	NS	*14.19	NS	*13.91	*26.64	*19.78	NS
38	3	NS	NS	*18.37	14.02	21.94	NS	156.20	33.93
43	3	NS	*11.66	*11.68	NS	23.77	NS	255.10	NS
50	3	11.51	NS	NS	14.42	103.70	50.23	85.12	NS

Question Number	df†	Chi Square by Occupational Code: Modified							
		(29)	(32)	(40)	(50)	(10)	(12)	(28)	(61)
13	2		NS	NS					NS
14**	2		*11.05	NS					NS
22	3	NS	NS	*13.92	NS	13.61	26.29	12.71	NS
38	2		NS	NS					
43	2		NS	10.35					
50	2		NS	NS					NS

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*Indicates that expected frequencies are less than five. Significant difference is therefore in doubt.

**Response 4 omitted from calculations.

†df indicates degrees of freedom.

Response Number	Chi Square by Occupational Code Degrees of Freedom = 1							
	(29)	(32)	(40)	(50)	(10)	(12)	(28)	(61)
27 (0)	NS	NS	NS	NS	NS	7.32	15.01	8.29
(1)	NS	NS	19.60	9.87	NS	NS	112.20	25.93
(2)	NS	NS	NS	NS	NS	NS	NS	NS
(3)	NS	NS	NS	NS	31.89	22.82	NS	NS
(4)	NS	NS	NS	NS	NS	NS	NS	NS
(5)	NS	NS	NS	NS	NS	NS	NS	NS
(6)	NS	NS	NS	7.21	17.81	NS	NS	NS
(7)	NS	7.59	9.10	NS	NS	14.42	15.85	NS
(8)	NS	17.40	NS	NS	NS	26.94	NS	NS
(9)	NS	NS	NS	NS	NS	NS	NS	NS

EIGHT SELECTED OCCUPATIONAL PROGRAMS vs. ALL STUDENTS
(Continued)

Response Number	Chi Square by Occupational Code Degrees of Freedom = 1							
	(29)	(32)	(40)	(50)	(10)	(12)	(28)	(61)
30 (0)	8.56	NS	NS	NS	18.13	NS	NS	49.43
(1)	NS	NS	NS	8.55	NS	9.70	NS	NS
(2)	NS	NS	NS	13.03	NS	NS	10.21	NS
(3)	14.83	NS	NS	NS	28.01	6.85	21.93	NS
30 (4)	8.58	NS	NS	7.20	NS	NS	25.99	NS
(5)	29.79	10.97	NS	NS	13.28	11.69	19.23	9.44
(6)	NS	NS	NS	NS	NS	20.35	NS	71.62
(7)	NS	NS	NS	NS	NS	NS	9.60	NS
(8)	NS	NS	7.63	12.14	8.42	NS	14.58	402.60
(9)	NS	NS	NS	NS	NS	NS	7.26	NS
49 (0)	NS	NS	NS	14.04	41.22	48.91	113.89	NS
(1)	NS	NS	NS	NS	15.40	22.92	25.43	NS
(2)	NS	NS	NS	NS	13.13	14.34	52.09	NS
53 (0)	NS	NS	NS	NS	NS	NS	98.16	8.46
(1)	NS	NS	NS	NS	NS	NS	NS	NS
(2)	NS	NS	NS	NS	NS	14.63	24.26	19.60
(3)	NS	NS	NS	NS	12.87	NS	47.79	18.26
(4)	9.38	NS	NS	8.62	73.67	23.62	NS	7.56
(5)	NS	NS	19.41	NS	NS	NS	NS	NS
53 (6)	NS	NS	NS	NS	7.23	NS	36.68	NS
(7)	NS	NS	NS	NS	NS	NS	23.24	NS
(8)	NS	NS	NS	NS	NS	NS	8.64	NS
(9)	NS	NS	NS	NS	NS	NS	35.42	NS
54 (0)	NS	NS	NS	NS	NS	NS	9.55	NS
(1)	NS	NS	NS	NS	23.45	21.33	7.64	9.19
(2)	NS	NS	NS	NS	17.00	11.36	50.89	NS
(3)	NS	NS	NS	NS	NS	NS	NS	NS
(4)	NS	NS	NS	NS	NS	15.63	30.73	NS
(5)	NS	NS	NS	NS	NS	NS	16.42	NS
(6)	NS	NS	NS	8.76	7.69	NS	9.15	NS
(7)	NS	NS	8.12	NS	NS	NS	NS	NS
(8)	NS	NS	NS	NS	NS	NS	13.11	12.65
(9)	NS	NS	NS	NS	NS	NS	NS	NS
57 (0)	NS	NS	11.41	NS	43.17	29.79	NS	NS
(1)	NS	NS	NS	7.03	27.06	19.19	23.90	NS
(2)	9.30	NS	NS	NS	10.72	29.09	53.14	NS
(3)	NS	NS	NS	NS	NS	9.01	14.80	NS
(4)	NS	NS	NS	NS	NS	NS	57.46	NS
(5)	NS	NS	NS	NS	24.39	25.65	10.25	NS
(6)	NS	NS	NS	NS	NS	NS	NS	NS
(7)	NS	14.58	NS	NS	8.42	25.72	9.93	NS
(8)	NS	NS	NS	NS	10.12	18.99	NS	NS
(9)	NS	NS	NS	NS	NS	NS	NS	NS

APPENDIX E

F 43-7 (2-68)

Minnesota State Department of Education
Pupil Personnel Services Section
Centennial Building
St. Paul, Minnesota 55101

AREA VOCATIONAL TECHNICAL SCHOOL STUDENT QUESTIONNAIRE

DIRECTIONS TO STUDENTS:

The purpose of this questionnaire is to try to find ways in which your school can be of more help to you. We want to know your opinion. The important thing is for you to tell us exactly how you feel about things, and to be perfectly honest with your answers.

This questionnaire is confidential. You may sign your name if you wish, but it is not necessary for you to do so.

Please use the answer sheet for all questions. Use a soft lead pencil (No. 2), and fill in the space completely. If you change your mind, erase the old mark completely. Please note that you may give more than one answer to many of the questions. In the test booklet, there is room at the end of many of the questions for you to write any comments or opinions which you may have.

Thank you for your help in telling us what you like about this school, and ways in which you think that things could be improved.

Section A: Identification Data

1. Name of School____________________________________

2. Name of your Occupational Program________________________

3. How old are you?
   (0) 16 years or under.
   (1) 17 years old.
   (2) 18 years old.
   (3) 19 years old.
   (4) 20 years old.
   (5) 21 years old.
   (6) 22 to 25 years old.
   (7) 26 to 40 years old.
   (8) 41 years or older.

4. (0) I am male.
   (1) I am female.

5. What is your marital status?
   (0) Single.
   (1) Married.
   (2) Separated.
   (3) Divorced.
   (4) Divorced and remarried.
   (5) Spouse deceased.
   (6) Spouse deceased and remarried.

6. How much schooling did you have before you enrolled here?
   (0) I did not graduate from high school.
   (1) I am a high school graduate.

(2) I attended another post high vocational school before coming here.
(3) I attended college.
(4) I graduated from junior college.
(5) I graduated from college.
(6) Other (explain)______________________________
____

7. (0) I am a veteran.
(1) I am not a veteran.

8. (0) I am a full time student here.
(1) I am a part time student here.

9. How many months ago did you begin your present study?
(0) Twelve or less.
(1) More than 12 months.

Section B: Housing Information

10. How far *is* your home town from this school?
(0) This is my home town.
(1) Less than 35 miles.
(2) At least 35 miles but less than 50 miles.
(3) At least 50 miles but less than 100 miles.
(4) At least 100 miles away.

11. Where are you living now?
(0) In an apartment or house that I rent.
(1) I rent a room in a private house.
(2) In some housing owned and operated by the school.
(3) With my parents.
(4) With relatives other than my parents.
(5) In a house I own.
(6) In a hotel or motel.
(7) In the YMCA or the YWCA.
(8) Other (explain)______________________________
____

12. How did you find a place to live when you came to this school?
(0) I already had a place to live.
(1) Someone here at school helped me find a place to live.
(2) Another student at the school helped me find a place to live.
(3) Friends or relatives here in town helped me find a place.
(4) I just looked around myself until I found a place to live.
(5) Other (explain)______________________________
____

13. How much trouble did you have finding a place to live?
(0) No trouble at all.
(1) Not much: I found a place in just a day or so.
(2) Some trouble: I had to look around for a week or so to find a place.
(3) Quite a bit of trouble: I thought for a while I might not find a place.
Comments______________________________
____

14. If you do not live at home, how well satsified are you with the place where you live now?
(0) Very satisfied. I don't know how it could be better.
(1) Satisfied. There isn't much to complain about.
(2) Somewhat dissatisfied. It's not what I was hoping to get.

(3) Very dissatisfied. I really don't like it at all.
(4) I live at home.
Comments____

____

15. If you are living away from home, what things do you like about the place where you live now? **Mark all which apply.**
(0) It's close to the school.
(1) It's nice and quiet so I can study.
(2) Most of my friends live near here.
(3) The food is good.
(4) I like the idea of not having anybody tell me what to do.
(5) It's a very comfortable and attractive place to live.
(6) It doesn't cost me much.
(7) I live at home.
(8) Other (explain)____

____

16. If you are living away from home, what things do you dislike about the place where you live now? **Mark all which apply.**
(0) It's too far from school.
(1) It's too quiet.
(2) There isn't anything to do in my spare time.
(3) The rules are too strict.
(4) It's so noisy that I can't do any studying.
(5) It costs too much.
(6) The house is pretty run down.
(7) I like it here.
(8) I live at home.
(9) Other (explain)____

____

Section C: Financial Information

17. What are your sources of support while you are in school? **Mark all which apply.**
(0) My parents.
(1) My savings.
(2) G. I. Bill.
(3) The Vocational Rehabilitation Division.
(4) The Bureau of Indian Affairs.
(5) Manpower Development Training.
(6) I have a job.
(7) My wife (or husband) is working.
(8) I have borrowed money to go to school.
(9) Other (explain)____

____

18. How many persons, including yourself, are dependent on you for financial support?
(0) None.
(1) One.
(2) Two.
(3) Three.
(4) Four.
(5) Five or more.

19. Do you need help in finding a job to help pay expenses?
(0) Yes.

(1) No.
Comments____
____

20. If you have a job now, about how many hours a week do you work?
(0) I don't have a job now.
(1) Less than 10 hours a week.
(2) At least 10 but less than 20 hours a week.
(3) At least 20 but less than 30 hours a week.
(4) At least 30 but less than 40 hours a week.
(5) At least 40 hours a week.

21. If you have a job now, how did you find it?
(0) The vocational counselor here at school helped me find it.
(1) Some other staff member here at school helped me find it.
(2) My high school counselor helped me find it.
(3) A friend or relative told me about it.
(4) I saw an ad in the paper.
(5) I had a job before I enrolled in this school.
(6) I don't have a job now.
(7) Other (explain)______________________________________
____

22. How much trouble are you having getting enough money to make it through this school?
(0) No trouble.
(1) It's a little hard, but I'm making it O.K.
(2) It's very hard but I can do it.
(3) It's so hard that I may not be able to finish the course.
(4) It's so hard I think I'm definitely going to quit.
Comments____
____

23. If you had known before coming here that it would cost as much as it does, would you have come anyway?
(0) Yes, I definitely would.
(1) I probably would have.
(2) I probably would not have.
(3) No, I definitely would not have.
Comments____
____

Section D: School Information

24. How did you find out about this school? Mark all which apply.
(0) I found it on my own.
(1) Friends or relatives told me about it.
(2) My parents wanted me to come here.
(3) A high school counselor suggested it to me.
(4) A high school teacher told me about it.
(5) One of the instructors here talked to me.
(6) The State Employment Agency recommended this school.
(7) Other (explain)______________________________________
____

25. Did you visit the school and look around before signing up?
(0) Yes.
(1) No.

26. Who did you talk with when you visited the school? **Mark all which apply.**
(0) I didn't visit the school before signing up.
(1) I talked with the Director or the Assistant Director.
(2) I talked with a counselor at this school.
(3) I talked with an instructor.
(4) I talked with some other staff member.
(5) I talked with one or more of the students here.
(6) I talked with somebody in the front office.
(7) Nobody talked to me when I came to visit.
(8) Other (explain)____
____

27. What is there about this school that makes it a good school for you? **Mark all which apply.**
(0) Here we study only what we need to know, not things like poetry and history.
(1) Here they have equipment the other schools just don't have.
(2) If you go here, you can get a job when you finish.
(3) Here the instructors know what they are talking about.
(4) I couldn't get a course like this in high school.
(5) They have a good extra-curricular program here.
(6) They have a good schedule of social events here.
(7) It's close to home.
(8) There is no charge for tuition here.
(9) Other (explain)____
____

28. Do you have to study after school in order to keep up here?
(0) No. We do all our work here at school.
(1) Sometimes, but not often.
(2) I usually study for a while but not as much as an hour.
(3) I usually study for at least an hour after school.
(4) Yes. I always have to study after school to be ready for the next day.

29. How well do you feel that your high school education prepared you for the things that you are studying now?
(0) Very well. I've had good training in the subjects that I need, and this makes it easy for me in my courses here.
(1) Fairly well. There are some things that I don't understand too well in my courses here.
(2) Poor. I don't think my high school education was much help for the work that I'm doing here.
Comments____
____

30. What things do you find that are especially hard for you to do in the courses you are taking? **Mark all which apply.**
(0) The math.
(1) Reading.
(2) Writing answers to questions.
(3) Explaining what I want to say.
(4) Understanding the technical language.
(5) Layout or drawing.
(6) Hand skills I need for the job.
(7) Operating the tools and machines.
(8) None of it is especially hard.
(9) Other (explain)____
____

31. How do you judge your own ability to learn in your classes?
    - (0) High. It comes to me easily, and I usually understand what they are trying to teach me.
    - (1) Average. I seem to be learning what I should most of the time, but it isn't always easy.
    - (2) Low. I guess I really don't understand what's going on most of the time, and I'm having a hard time competing with the rest of the class.

Section E: Social and Recreational

32. Do you think that there is a friendly relationship among the students in this school?
    - (0) Yes. Everybody seems to be very friendly.
    - (1) Some people are friendly, but not everybody.
    - (2) No. Everybody seems too busy to be very friendly.
    - Comments

33. Do you feel that this school and the town in which you are now living provide enough recreational activities for you?
    - (1) Yes. There is always something to do when I have spare time.
    - (0) Some. There are some activities that I am interested in, but I wish there were more.
    - (2) No. There is never anything to do when I am not in school or studying.

34. What kinds of activities would you like to see provided by the school or the town in which you are now living? Mark all which apply.
    - (0) Intramural activities.
    - (1) Dances.
    - (2) Recreational sports.
    - (3) Competitive sports.
    - (4) Clubs.
    - (5) Student government.
    - (6) Student newspaper.
    - (7) A yearbook.
    - (8) Movies.
    - (9) Other (Please list)

35. How well do your instructors know you?
    - (0) All of them know me well.
    - (1) Most of them know me well.
    - (2) About half know me well and about half don't.
    - (3) Most of them don't know me very well.
    - Comments

36. Do most of your close feiends attend this school?
    - (0) Yes.
    - (1) No.
    - (2) Some do, but not all of them.

37. Where do most of your close friends live?
    - (0) This is my home town, so most of my friends are here.
    - (1) In this area.
    - (2) In my home town.

Section F: Career Plans

38. How much trouble have you had in choosing a definite area of training?
    - (0) A great deal. It's very hard to decide what to do.

(1) Some trouble. I was pretty mixed up for a while, but now I think that I know what I want to do.
(2) Very little. I guess I always knew the kind of work I wanted to do.
(3) I still haven't decided.
Comments____
____

39. How many times have you changed courses since you've been enrolled in this or any other vocational-technical school?
(0) None.
(1) Once.
(2) Twice.
(3) Three times.
(4) Four or more times.

40. Do you think you will be changing courses later on?
(0) No. Our school does not allow course changes.
(1) No. I don't plan on changing courses.
(2) I might change courses, but I'm not sure that I will.
(3) Yes. I think I will change to a different course.

41. How much did you know about your present training program before you started it?
(0) I knew quite a bit about it before I signed up.
(1) I knew a little bit, but really not very much.
(2) I guess I really didn't know much about it at all before I began.
Comments____
____

42. Where did you receive information about the training program you are in? Mark all which apply.
(0) From reading about it.
(1) From my high school counselor.
(2) From the vocational counselor here.
(3) From some other staff member at this school.
(4) From a teacher or a course I took in high school.
(5) From jobs I have had.
(6) From friends or relatives.
(7) I didn't know much about it.
(8) Other (explain)____________________________________
____

43. How definite is your present choice of occupation?
(0) Very definite. I'm very sure about what I want to do.
(1) Fairly definite. I could change my mind, but as of now, my present choice seems best for me.
(2) Somewhat indefinite. This seemed to be the best choice, but now I'm beginning to wonder.
(3) Very indefinite. I am very uncertain now as to what my occupational goals should be.
Comments____
____

44. How well satisfied are you with the training program in which you are enrolled at the present time?
(0) Well satisfied. I think it is a good program, and really teaches me what I need to know.
(1) It's not too bad, but I guess it could be better in some ways.

(2) Very dissatisfied. In my opinion, it's not a good program at all.
Comments________________________________

____

45. Do you think you will enjoy working on the job which you are planning to enter?
    (0) Yes. I think I will like it a lot.
    (1) Maybe. I seldom think about the work I am going to do.
    (2) No. I guess everybody has to go to work sooner or later, but I don't look forward to it.
    Comments________________________________

    ____

46. What do you think your chances are of finishing the course in which you are enrolled?
    (0) Excellent. I'm sure I will finish.
    (1) Good. I think I will probably finish.
    (2) Fair. I may or may not finish, depending on what comes up.
    (3) Poor. I probably will not finish.
    (4) Very poor. I definitely plan to quit as soon as I can.
    Comments________________________________

    ____

47. Do your parents approve of the decision you have made about the kind of work you want to do?
    (0) Yes. They like the idea.
    (1) They haven't said much about it either way.
    (2) No. They'd rather I did something else.
    Comments________________________________

    ____

48. What does your wife (or husband) think about your choice of training program?
    (0) Thinks it's a good idea.
    (1) Hasn't said much about it.
    (2) Definitely doesn't want me to do this.
    (3) I am not married.
    Comments________________________________

    ____

49. If you could be doing just as you wished ten or twelve years from now, would you be doing the job you are now preparing for?
    (0) Yes.
    (1) No.
    (2) Unsure.
    Comments________________________________

    ____

50. How hard do you think it will be to line up a job when you finish your training here?
    (0) No trouble. I already know where I will be working.
    (1) Easy. I don't think I'll have much trouble.
    (2) Somewhat difficult. I think I'm going to need quite a bit of help.
    (3) Very difficult. I don't know how to go about getting the kind of work that I want to do.
    Comments________________________________

    ____

51. Does your home town have opportunities for employment in the kind of work that you are preparing to do?
    (0) Yes.
    (1) No.
    (2) There are a few jobs, but not many.

52. How much trouble would it be to you if you had to move out of town to find a job?
    (0) No trouble at all. I plan to move out of town when I'm finished school.
    (1) Some. I'd rather stay in my home town if I could.
    (2) I definitely don't want to leave my home town unless I absolutely have to.

What have you found are some of the problems in choosing the kind of work that you want to do?

Section G: Summary

53. What things were of greatest concern to you when you first began attending this school? **Mark all which apply.**
    (0) Getting a job.
    (1) Finding a place to live.
    (2) Transportation.
    (3) Trying to work and go to school at the same time.
    (4) Making friends.
    (5) Finding something to do in my spare time.
    (6) Making a career choice.
    (7) Personal or family problems.
    (8) None.
    (9) Other (explain)

54. What things bother you most at the present time? **Mark all which apply.**
    (0) Money problems.
    (1) Family or personal problems.
    (2) Unsure about career plans.
    (3) Making friends.
    (4) Bored with school.
    (5) I don't like the place where I am living.
    (6) I need some help with my school work.
    (7) Finding something to do in my spare time.
    (8) None.
    (9) Other (explain)

55. What kinds of student services have you received since you've been here at this school? **Mark all which apply.**
    (0) Information about careers and job opportunities.
    (1) Finding a job.
    (2) Someone to talk to about my problems.
    (3) Help in locating a place to live.
    (4) Telling me where I can get financial help.
    (5) Advice about the courses I should take.
    (6) Classes to help catch up on subjects I missed in high school.

(7) Orientation to the school.
(8) None.
(9) Other (explain)____
____

56. What people have given you assistance or service in any of the problems you have had here at school? Mark all which apply.
(0) The Director or Assistant Director.
(1) A counselor at this school.
(2) An instructor or department head.
(3) The employment office at this school.
(4) Friends and relatives.
(5) None.
(6) Other (explain)____
____

57. What kinds of assistance and services do you feel should be made available for students? Mark all which apply.
(0) Help with career choice and planning.
(1) Help in finding a job.
(2) Somebody to talk to about personal problems.
(3) Help in locating a place to live.
(4) Telling students where they can get financial assistance.
(5) Advice about the right courses to take.
(6) Special classes that students need.
(7) Some social and recreational activities.
(8) None.
(9) Other (explain)____
____

What kind of a guidance and counseling program would be most useful for you?
____
____
____

PRINTED IN U. S. A.

AREA VOCATIONAL TECHNICAL SCHOOL STUDENT QUESTIONNAIRE

SECTION A

1. SCHOOL NAME:
0 1 2 3 4 School 5 6 7 8 9
0 1 2 3 4 Code 5 6 7 8 9

2. OCCUPATIONAL PROGRAM:
0 1 2 3 4 Occup. 5 6 7 8 9
0 1 2 3 4 Prog. Code 5 6 7 8 9

3. 0 1 2 3 4 5 6 7 8
4. 0 1
5. 0 1 2 3 4 5 6
6. 0 1 2 3 4 5 6
7. 0 1
8. 0 1
9. 0 1

SECTION B

10. 0 1 2 3 4
11. 0 1 2 3 4 5 6 7 8
12. 0 1 2 3 4 5
13. 0 1 2 3
14. 0 1 2 3 4

15.
0 3 6
1 4 7
2 5 8

16.
0 4 8
1 5 9
2 6
3 7

SECTION C

17.
0 4 8
1 5 9
2 6
3 7

18. 0 1 2 3 4 5
19. 0 1
20. 0 1 2 3 4 5
21. 0 1 2 3 4 5 6 7
22. 0 1 2 3 4
23. 0 1 2 3

SECTION D

24.
0 3 6
1 4 7
2 5

25. 0 1

26.
0 3 6
1 4 7
2 5 8

27.
0 4 8
1 5 9
2 6
3 7

28. 0 1 2 3 4
29. 0 1 2

SECTION E

30.
0 4 8
1 5 9
2 6
3 7

31. 0 1 2
32. 0 1 2
33. 0 1 2

34.
0 4 8
1 5 9
2 6
3 7

35. 0 1 2 3
36. 0 1 2
37. 0 1 2

SECTION F

38. 0 1 2 3
39. 0 1 2 3 4
40. 0 1 2 3
41. 0 1 2 3

42.
0 3 6
1 4 7
2 5 8

43. 0 1 2 3
44. 0 1 2
45. 0 1 2
46. 0 1 2 3 4
47. 0 1 2
48. 0 1 2 3
49. 0 1 2
50. 0 1 2 3
51. 0 1 2
52. 0 1 2

SECTION G

53.
0 4 8
1 5 9
2 6
3 7

54.
0 4 8
1 5 9
2 6
3 7

55.
0 4 8
1 5 9
2 6
3 7

56.
0 3 6
1 4 7
2 5

57.
0 4 8
1 5 9
2 6
3 7

DIRECTIONS FOR THE ADMINISTRATION OF THE AREA VOCATIONAL TECHNICAL SCHOOL STUDENT QUESTIONNAIRE

The questionnaire is to be administered to all post-high school students who are present at the time chosen for testing. Night school students are not included in this survey.

The Day Before:

Inform all students that they will need to have a **soft lead pencil** (No. 2) with eraser for use in marking the answer sheet. Have additional pencils available for those who need them. If No. 2 pencils are needed, please contact Pupil Personnel Services, State Department of Education ahead of time, Tel: 612-221-2832.

Please note the **code number** of your school, and the **code number** of the occupational programs offered in your school (see attached sheets). If the questionnaire is to be administered in a large group setting, it will be necessary for you to be prepared to present the code number of all occupational programs offered in your school as quickly and efficiently as possible.

At the Time the Test is Administered:

Briefly call attention to the **Directions to Students** on the cover page of the test booklet.

Have the students write the following information on the **answer sheet:**

Question 1: Name of School
Code Number of School

Question 2: Name of his Occupational Program
Code Number of his Occupational Program

It is suggested that an example be given to illustrate the correct way to mark question one:

Example: Question 1:

If your school has Code No. 09, you would mark it this way:

0 1 2 3 4 5 6 7 8 9

0 1 2 3 4 5 6 7 8 **9**

If your school has Code No. 14, you would mark it this way:

0 **1** 2 3 4 5 6 7 8 9

0 1 2 3 **4** 5 6 7 8 9

Have the students write this information in the **test booklet:** Name of School, Name of Occupational Program.

Inform the students that they will have 45 minutes, or one class period, in which to finish the questionnaire.

When Testing is Completed:

Mail the answer sheets and the test booklets to this office within 24 hours after testing is completed in order that we may begin to process the data.

The results of this survey will be reported to you. Individual school results will not be identified in the study by school name. You will receive three sets of data: (1) the number and percent of all students in all schools who marked each

response, (2) the number and percent of all students in your own school who marked each response, and (3) the number and percent of students of each sex in all schools who marked each response. Additional analysis will be made of the responses of students from all schools in selected occupational programs. This data will be made available to those schools which offer the occupational programs which have been selected for special study.

Thank you for your cooperation in this study.

Reynold M. Erickson, Director
Pupil Personnel Services
State Department of Education
Centennial Building
St. Paul, Minnesota 55101

CODE NUMBER OF SCHOOLS

For use with the Area Vocational Technical School Student Questionnaire

01. Alexandria
02. Anoka
03. Austin
04. Bemidji
05. Brainerd
06. Canby
07. Detroit Lakes
08. Duluth*
09. Eveleth
10. Faribault
11. Granite Falls
12. Hibbing
13. Jackson
14. Mankato
15. Minneapolis
16. Moorhead
17. Pine City
18. Pipestone
19. Rochester
20. St. Cloud
21. St. Paul
22. Staples
23. Thief River Falls
24. Wadena
25. Willmar
26. Winona

CODE NUMBER OF OCCUPATIONAL PROGRAMS

For use with the Area Vocational Technical School Student Questionnaire

The Code Numbers for Occupational Programs in your school are written in after each program.

***Elected not to participate in study**

CODE NUMBERS FOR ALL OCCUPATIONAL PROGRAMS

Agricultural Related Occupations

01. Agri Business (includes sales and banking)
02. Agri-Technology
03. Farm Management
04. Nursery and Landscape Technology

Art

05. Commercial Art
06. Interior Design
07. Metal Arts

Business, Accounting, Clerical, Secretarial

08. Accounting
09. Business Management
10. Clerical Training
11. Data Processing and Tab Technician
12. Secretarial Training
13. International Documents Specialist

Construction Industry

14. Bricklaying
15. Cabinet Making
16. Carpentry
17. Plumbing
18. Sheet Metal
19. Welding
20. Construction

Food Related Occupations

21. Bakery
22. Chefs and Cooks
23. Food Management and Merchandising
24. Meat Cutting

Health Related Occupations

25. Dental Assistant
26. Medical Laboratory Assistant
27. Optical Technology
28. Practical Nursing

Machine Trade Occupations

29. Machinist
30. Pattern Maker
31. Tool and Die
32. Machine Operator

Mechanics and Machinery Repair

33. Aircraft Mechanics
34. Appliance Repair, Air Conditioning, Heating and Refrigeration
35. Automotive Mechanics
36. Diesel Mechanics
37. Electronics: Mechanical
38. Farm Equipment Mechanics
39. Fluid Power Mechanics
40. Heavy Equipment Operation and Maintenance
41. Marine and Small Engine Mechanics
42. Office Machine Mechanics
43. Plant Mechanics (Millwright)
44. Auto Body

Printing and Graphic Arts

45. Printing
46. Graphic Arts

Technical Occupations

47. Civil and Highway Technology
48. Concrete Technician
49. Drafting
50. Electronics
51. Fluid Power Technology
52. Industrial Chemistry
53. Instrumentation
54. Plastic Injection Molding Technician
55. Power and Home Electricity
56. Stationary Engineer: Power Plant Operation

Sales and Marketing

57. Fashion Merchandising
58. Retail Floristry
59. Other Sales

Service and Other Occupations

60. Barbering
61. Cosmetology
62. Jewelry and Watch Repair
63. Law Enforcement
64. Shoe Repair
65. Tailoring
66. Upholstering
67. Needle Arts
68. Production Arts

MINNESOTA GUIDANCE PUBLICATIONS

Guidance: A Statement of Philosophy
Minnesota Blueprint for Guidance
The Parent and the Counselor
The Teacher's Role in Career Development
Career Charts
Counselor's Handbook
The Teacher Looks at Guidance
The Administrator's Guidance Handbook
The Teacher and Guidance in Minnesota
College Information Guide
Minnesota Test-Norms — Expectancy Tables
Apprenticeship Training in Minnesota
Earning While Learning —an apprenticeship brochure
Suggested Units on Career Planning
The Minnesota Filing Plan
Audio-Visual Guidance Materials
Careers with the State of Minnesota
Referral and Rehabilitation Resources in Minnesota
Paramedical Training in Minnesota
Facilitating Learning and Individual Development
The Elementary School Guidance Counselor
Counseling is . . .
Directory of Courses Offered in Area Vocational-Technical Schools
Minnesota Testing Programs: A Study
Guidance Programs and Their Impact on Students
Counselor Education in Minnesota: A Status Study
Vocational Students' Perception of Guidance Needs
The Minnesota Senior
Minnesota Guidance Bulletin